

# Antenna SPEC

Supplier Name: Sichuan Boantong Communication Technology Co., Ltd.

Supplier Material Name: Built-in Antenna - 2.4G/5G - Black 1.13 Tin Wire - 1st Generation Terminal - L=200mm - FPC - 38.2×6.7mm

Supplier Specifications and Model: 74300345

CVTE Material Number: 004.032.0053113

Acknowledgment Edition: A0-0925

Drawing version number (not required if there is no drawing): A0

| Supplier Acknowledgment Column |            |            |
|--------------------------------|------------|------------|
| Formulate                      | Review     | Approve    |
| Xuzhangjin                     | Qinlinshu  | Liulihua   |
| 2025.09.25                     | 2025.09.25 | 2025.09.25 |

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## Document Revision History

[illegible]

# Antenna SPEC

Customer name: Shi KunCustomer project: CF7&CF8Customer P/N: 004.032.0053113B&T P/N: 74300345Spec : Built-in Antenna - 2.4G/5G - Black 1.13 Tin Wire - 1st GenerationTerminal - L=200mm - FPC - 38.2×6.7mm

Sealed by corporation:

|             |           |          |
|-------------|-----------|----------|
| compilation | verify    | approval |
| Xuzhangjin  | Qinlinshu | Liulihua |

Sealed by customer:

|       |        |          |
|-------|--------|----------|
| check | verify | approval |
|       |        |          |

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2nd

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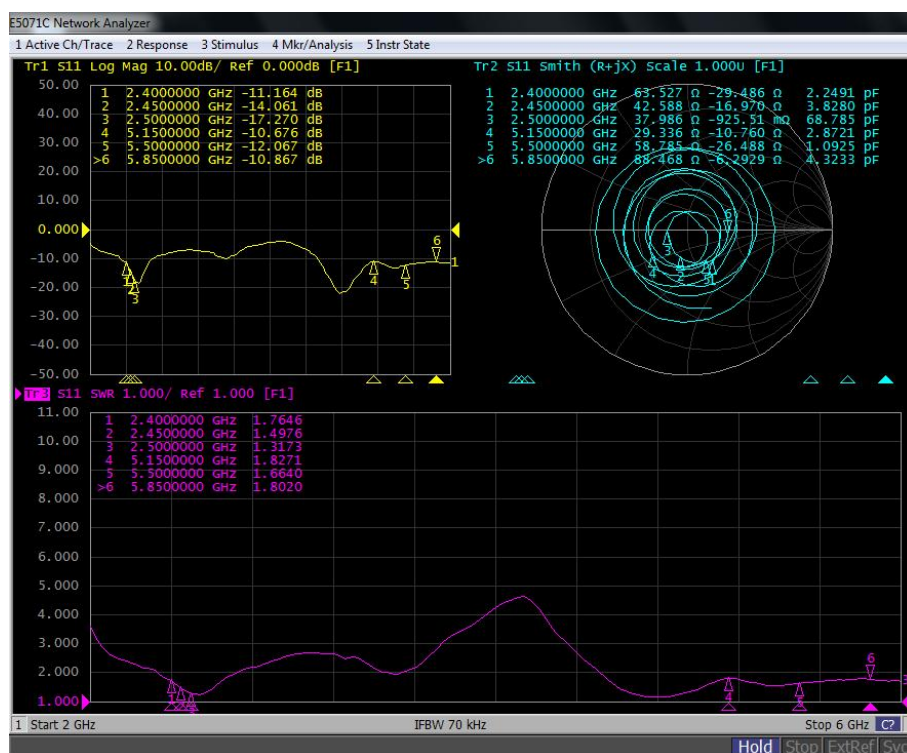
### 3、Product drawing

#### 4、Properties &parameter

| Electrical parameter     |                                  |
|--------------------------|----------------------------------|
| Freq Range               | 2400~2500/5150~5850MHz           |
| Characteristic Impedance | 50 $\Omega$                      |
| VSWR                     | <2                               |
| Gain                     | 5.49dBi                          |
| The Max input power      | <10w                             |
| Polarization mode        | Linear polarization              |
| Radiation direction      | omnidirectional                  |
| Joint type               | Terminal                         |
| Mechanical parameter     |                                  |
| Length                   | 200 $\pm$ 3mm                    |
| Terminal holding force   | $\geq$ 0.8kgf                    |
| Coaxial cable            | Black 1.13 Tin Wire              |
| Salt spray test          | 24H                              |
| Environment parameter    |                                  |
| Operating Temp           | -30 $^{\circ}$ C~65 $^{\circ}$ C |

## 5、Electrical test report (Whole machine testing)

### Antenna S11 parameter diagram



### Standing wave ratio data

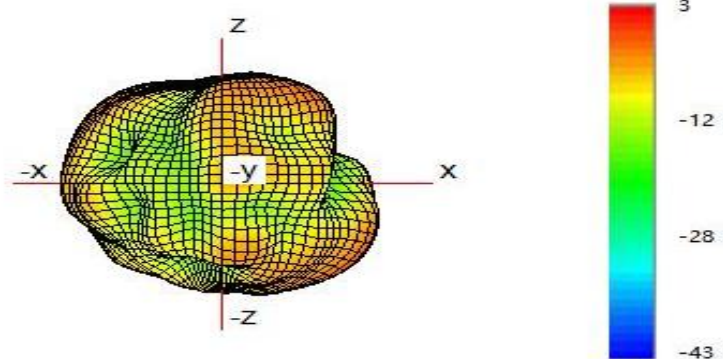
|          |      |      |      |      |      |      |
|----------|------|------|------|------|------|------|
| Freq/MHz | 2400 | 2450 | 2500 | 5150 | 5500 | 5850 |
| WIFI 天线  | 1.76 | 1.50 | 1.32 | 1.83 | 1.66 | 1.80 |

## Antenna darkroom test data

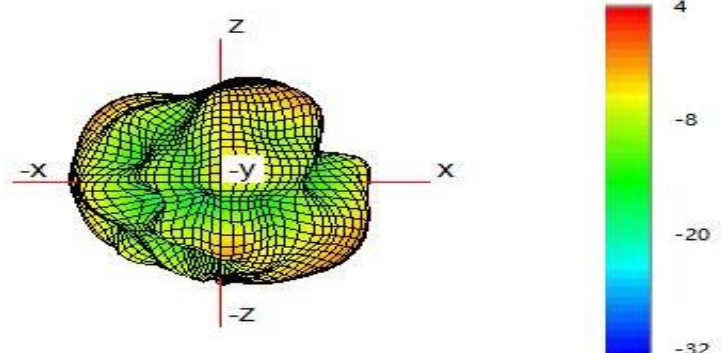
| Freq(MHz) | Gain(dBi) | Efficiency(%) |
|-----------|-----------|---------------|
| 2400      | 2.87      | 43.30         |
| 2410      | 2.84      | 43.65         |
| 2420      | 2.80      | 44.14         |
| 2430      | 2.88      | 45.11         |
| 2440      | 3.04      | 45.79         |
| 2450      | 3.15      | 46.07         |
| 2460      | 3.26      | 47.01         |
| 2470      | 3.37      | 47.68         |
| 2480      | 3.40      | 47.42         |
| 2490      | 3.36      | 47.06         |
| 2500      | 3.40      | 47.05         |
| 5150      | 3.04      | 39.72         |
| 5250      | 2.77      | 38.10         |
| 5350      | 3.17      | 39.31         |
| 5450      | 2.70      | 37.72         |
| 5550      | 2.64      | 36.32         |
| 5650      | 3.48      | 35.31         |
| 5750      | 4.45      | 38.04         |
| 5850      | 5.49      | 39.37         |

## Antenna direction diagram

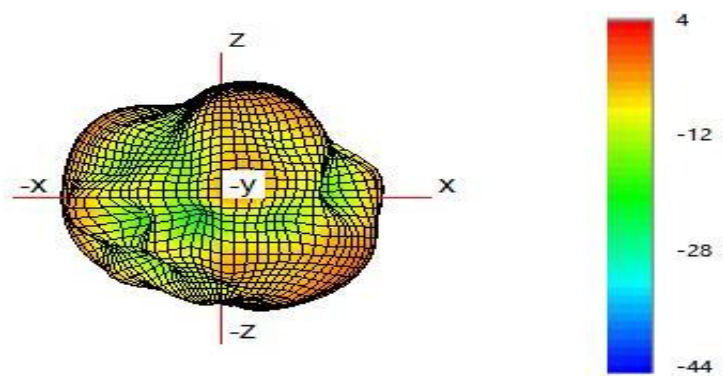
2400MHz



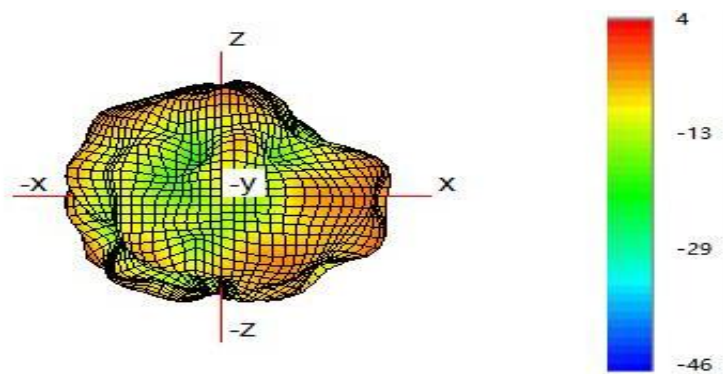
2450MHz



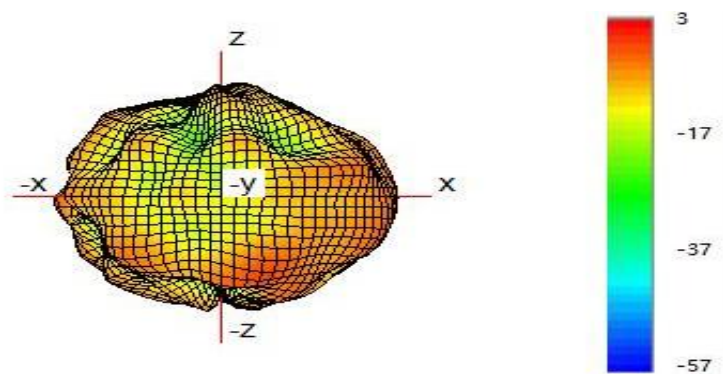
2500MHz



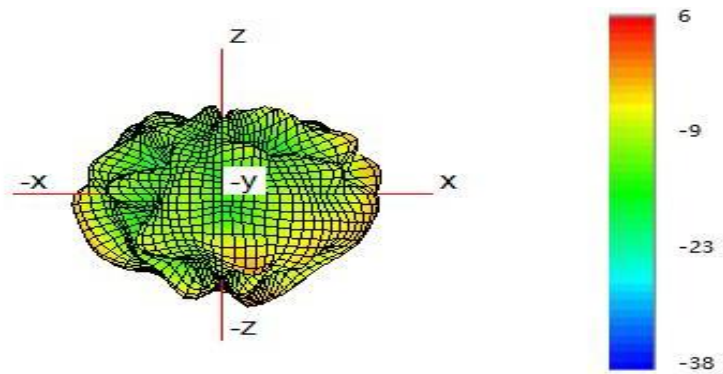
5150MHz



5500MHz



5850MHz



➤ Active OTA test data

| 样品      | 设备     | 测试项  | 模式 | 速率 (TRP) | 速率 (TIS) | 信道  | 频率 (MHz) | TRP (dbm) | TIS (dbm) | TRP 测试值 (dbm) 低速率 | TIS 测试值 (dbm) 高速率 |
|---------|--------|------|----|----------|----------|-----|----------|-----------|-----------|-------------------|-------------------|
| CF7&CF8 | CMW270 | 2.4G | B  | 11       | 11       | 1   | 2412     | ≥10       | ≤-72      | 15.74             | -74.85            |
|         |        |      |    | 11       | 11       | 6   | 2437     |           |           | 16.25             | -74.16            |
|         |        |      |    | 11       | 11       | 11  | 2462     |           |           | 15.33             | -74.2             |
|         |        |      | G  | 6        | 54       | 1   | 2412     | ≥8        | ≤-61      | 13.86             | -62.26            |
|         |        |      |    | 6        | 54       | 6   | 2437     |           |           | 14.41             | -62.02            |
|         |        |      |    | 6        | 54       | 11  | 2462     |           |           | 14.77             | -61.65            |
|         |        |      | N  | 6.5      | 65       | 1   | 2412     | ≥8        | ≤-58      | 13.87             | -59.13            |
|         |        |      |    | 6.5      | 65       | 6   | 2437     |           |           | 14.41             | -59.01            |
|         |        |      |    | 6.5      | 65       | 11  | 2462     |           |           | 14.82             | -59.48            |
|         |        |      | ax | 7.3      | 73.1     | 1   | 2412     | ≥8        | ≤-58      | 13.56             | -62.03            |
|         |        |      |    | 7.3      | 73.1     | 6   | 2437     |           |           | 14.09             | -62.33            |
|         |        |      |    | 7.3      | 73.1     | 11  | 2462     |           |           | 14.41             | -62.71            |
|         |        | 5.8G | A  | 6        | 54       | 36  | 5180     | ≥8        | ≤-59      | 13.8              | -69.96            |
|         |        |      |    | 6        | 54       | 149 | 5745     |           |           | 12.59             | -65.83            |
|         |        |      |    | 6        | 54       | 165 | 5825     |           |           | 11.92             | -62.75            |
|         |        |      | N  | 6.5      | 65       | 36  | 5180     | ≥7        | ≤-57      | 13.51             | -65.85            |
|         |        |      |    | 6.5      | 65       | 149 | 5745     |           |           | 12.56             | -62.88            |
|         |        |      |    | 6.5      | 65       | 165 | 5825     |           |           | 11.82             | -60.28            |
|         |        |      | ac | 6.5      | 65       | 36  | 5180     | ≥7        | ≤-57      | 13.69             | -68.22            |
|         |        |      |    | 6.5      | 65       | 149 | 5745     |           |           | 12.31             | -63.71            |
|         |        |      |    | 6.5      | 65       | 165 | 5825     |           |           | 11.77             | -60.69            |
|         |        |      | ax | 7.3      | 73.1     | 36  | 5180     | ≥7        | ≤-57      | 14.1              | -69.47            |
|         |        |      |    | 7.3      | 73.1     | 149 | 5745     |           |           | 12.86             | -66.4             |
|         |        |      |    | 7.3      | 73.1     | 165 | 5825     |           |           | 11.9              | -64.59            |

6、List of Material Composition and Hazardous Substances

GYMGEST

(Certification of Restricted Substance)

We hereby certify that all the Material fully conform to the requirements of the YuanKong's Declaration of Conformity that had been signed, and the maximum concentration value of restricted substance in Materials comply with the latest 《Regulations on the management of hazardous substances.》



| Raw Material Test List |                   |                    |                     |                              |    |    |      |                                          |       |        |       |       |        |             |                    |            |                                                                                       |
|------------------------|-------------------|--------------------|---------------------|------------------------------|----|----|------|------------------------------------------|-------|--------|-------|-------|--------|-------------|--------------------|------------|---------------------------------------------------------------------------------------|
| Customer P/N:          |                   |                    |                     | Part Name                    |    |    |      | Vendor: Sichuan B&T Technology Co., Ltd. |       |        |       |       |        | Vendor P/N: |                    |            |                                                                                       |
| No                     | Raw Material Name | Raw Material Model | Raw Material Supply | Banned Substance Content/ppm |    |    |      |                                          |       |        |       |       |        | Test Lab    | Test Report Number | Test Date  | Attachment of third-party test report                                                 |
|                        |                   |                    |                     | Pb                           | Cd | Hg | Cr+6 | PBBs                                     | PBDEs | (DEHP) | (DBP) | (BBP) | (DEBP) |             |                    |            |                                                                                       |
| 1                      | wire              | FEP                | TH                  | ND                           | ND | ND | ND   | ND                                       | ND    | ND     | ND    | ND    | ND     | SGS         | WGPFC20000015815   | 2026/1/19  |  |
|                        |                   | Tinned wire        | TH                  | ND                           | ND | ND | ND   | ND                                       | ND    | ND     | ND    | ND    | ND     | CTI         | A2250416468101001  | 2025/6/20  |  |
| 2                      | Terminal          | Phosphor Bronze    | CH                  | 4                            | ND | ND | ND   | ND                                       | ND    | ND     | ND    | ND    | ND     | SGS         | CAREC25027363005   | 2025/11/13 |  |
|                        |                   | PBT                | CH                  | ND                           | ND | ND | ND   | ND                                       | ND    | ND     | ND    | ND    | ND     | CTI         | ETK25703619        | 2025/7/27  |  |
| 3                      | FFC               | FI                 | BYK                 | ND                           | ND | ND | ND   | ND                                       | ND    | ND     | ND    | ND    | ND     | SGS         | SHARC25031840901   | 2025/12/8  |  |
|                        |                   | Tape               | BYK                 | ND                           | ND | ND | ND   | ND                                       | ND    | ND     | ND    | ND    | ND     | SGS         | STARC25033068038   | 2025/8/28  |  |

1. If the homogeneous material is nonmetallic, three questions need to be answered: 1. Does it contain halogen? ☐ YES ☒ NO? 2. Does it contain red phosphorus? ☐ YES ☒ NO? 3. Does it contain antimony trioxide? ☐ YES ☒ NO?

2. If the above materials or materials belong to paint, ink, adhesive or cleaning agent, please fill in the VOC test report number in the corresponding remarks column, and attach this report to the raw material test list.

## PACKING CRITERION

P/N: 74300345

Spec: Built-in Antenna - 2.4G/5G - Black 1.13 Tin Wire - 1st Generation Terminal - L=200mm - FPC - 38.2×6.7mm

一、contents of label(according to the customer's name, refer to the corresponding finished product label production requirements. If there is no requirement, it will follow the ordinary label requirements.)

内外标签 长 10cm 宽 6cm 左右

The inner and outer labels are about 10cm long and 6cm wide

|                            |                                                   |                        |          |
|----------------------------|---------------------------------------------------|------------------------|----------|
| 需方<br>buyer                | *****                                             |                        |          |
| 供方<br>vender               | 四川博安通通信技术有限公司<br>Sichuan B&T Technology Co., Ltd. |                        |          |
| 物料编码<br>Purchase No        | *****                                             |                        |          |
| 生产单号<br>Material No.       | *****                                             |                        |          |
| 品名规格<br>Name specification | *****                                             | 检验员<br>QC              | **       |
| 数量/单位<br>Q'ty/Unit         | *****                                             | 日期<br>Manufacture date | ****.*** |
| 追溯码<br>Trace code          | *****                                             | 流水号<br>Serial number   | **       |

## 二、Packing requirement

Operating description:

### 1. inner packing:

50PCS per small bag

200PCS per large bag

### 2. outer packing:

Quantity according to actual packing/carton

Notice:

1. Whether to add partitions, pearl cotton;

2. Labeling, such as ROHS;

## 9、 Antenna installation position Diagram

## 10、 Reliability test requirements

| Serial Number | Reliability Test Name                  | Experimental conditions                                                                                                        | Judgment criteria                                                                                                                                                                                                                                                                     |
|---------------|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1             | Constant temperature and humidity test | High temperature: 70 °C, humidity: 80% RH for 24 hours; Low temperature -40 °C for 24 hours; continuous for 48 hours in total; | Appearance requirements before and after the experiment: The metal surface coating should be free of peeling, cracks, wrinkles, separation, etc. Non metallic parts should not discolor, crack, deform, or peel off; The electrical performance test meets the standard requirements; |

|   |                                              |                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                       |
|---|----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2 | High and low temperature thermal shock test  | 70 °C for 2 hours, -40 °C for 2 hours, 6 cycles, for a total of 24 hours;                                                                                                                                                                                                                                       | Appearance requirements before and after the experiment: The metal surface coating should be free of peeling, cracks, wrinkles, separation, etc. Non metallic parts should not discolor, crack, deform, or peel off; The electrical performance test meets the standard requirements; |
| 3 | Salt spray test                              | Prepare a (5 ± 1)% NaCl solution to ensure that the pH value of the salt solution is neutral (6.5-7.2); The pressure barrel temperature is 47 ± 1 °C, the spray pressure is kept at 1.00 ± 0.1kgf/cm <sup>2</sup> , and the spray volume is 1.0~2.0ml/80cm <sup>2</sup> /h; The experiment lasted for 24 hours; | The exposed area of the product surface must not have oxidation or rust; Oxidation/rusting area after salt spray test in other areas<1.0%                                                                                                                                             |
| 4 | Terminal holding force test                  | Normal temperature and humidity; Test maintenance force requirement: ≥ 0.8 kgf;                                                                                                                                                                                                                                 | The terminals and cables are not loose or detached; The electrical performance test after testing meets the standard requirements;                                                                                                                                                    |
| 5 | Terminal insertion and extraction force test | Normal temperature and humidity; The terminal and seat are connected normally, with an insertion force of 0.8~3kgf/extraction force of ≥ 0.8kgf;                                                                                                                                                                | The insertion/extraction force of the terminal meets the requirements, and the terminal has no defects such as detachment or damage;                                                                                                                                                  |