



SHENZHEN YINGJIACHUANG TECHNOLOGY ELECTRONIC CO. LTD

<http://www.szsyjc.com>

# 零件承认书

## Approval Sheet

S u p p l i e r : Shenzhen Yingjia Chuang Electronic Technology Co., LTD

P a r t N a m e : 4GHz FPC Black built-in antenna 1.13Black L=60MM

P c o d e :

v e r s i o n : V1.0

m a t e r i a l C o d e : YJC-6N060-B155

D a t e : December 03,2024

## Supplier confirmation

| check      | Proposed title/date | Review / date | Ratification/Date |
|------------|---------------------|---------------|-------------------|
| Huang Teng | Huang Teng          | Peng Huang    | Xiao Han          |

## Customer confirmation

| Quality/date | Research / Date | Product Manager / Date |
|--------------|-----------------|------------------------|
|              |                 |                        |



SHENZHEN YINGJIACHUANG TECHNOLOGY ELECTRONIC CO. LTD

<http://www.szsyjc.com>

# APPROVAL SHEET

|                   |                     |             |
|-------------------|---------------------|-------------|
| CUSTOMER NAME     |                     |             |
| CUSTOMER P/N      |                     |             |
| PART NAME         | 4G Built-in antenna |             |
| P/ N              | YJC-6N060-B155      |             |
| APPROVAL REV.     | V1.0                |             |
| DELIVERY DATE     | December 03, 2024   |             |
| PREPARED BY       | Huang Teng          |             |
| CHECKED BY        | Peng Huang          |             |
| APPROVED BY       | Xiao Han            |             |
| Customer Approved |                     |             |
| Approved By       | Checked By          | Prepared By |
|                   |                     |             |

Contact Information (factory) :

Company address: building C, guangming valley, hongyu guangming valley, no. 11, jiangyou magang, shiwei community, matantian office, guangming district, shenzhen

Dongguan Branch: No.2 Xinjia Industrial Park, No.3, Yinhe Road, Qiaotou Town, Dongguan City

Hangzhou Office: Room 509, Building 1, Binrun Science and Technology Innovation Park, No.5, Ren Street, Puyan Street, Binjiang District, Hangzhou

Mianyang Office: No.4F-34, Wanxiang High-tech International, No.35, Mianxing East Road, High-tech Zone, Mianyang City, Sichuan Province

Phone + 86-755-27810060/23192199; Fax: + 86-0755-27810057

Company website: <http://szsyjc.com> E-mail: [yjc@szsyjc.com](mailto:yjc@szsyjc.com)



---

## Directory

|     |                                                         |     |
|-----|---------------------------------------------------------|-----|
| 1、  | The cover                                               | 1   |
| 2、  | Directory                                               | 2   |
| 3、  | Resumer                                                 | 3   |
| 4、  | The antenna's floor plan                                | 4   |
| 5、  | Antenna technology parameters                           | 5   |
| 6、  | Environmental performance testing                       | 5   |
| 7、  | Physical picture of antenna and attach location picture | 6   |
| 8、  | Antenna performance test diagram                        | 6   |
| 9、  | OTA active test data statistics                         | 7-8 |
| 10、 | Full size test report                                   | 9   |

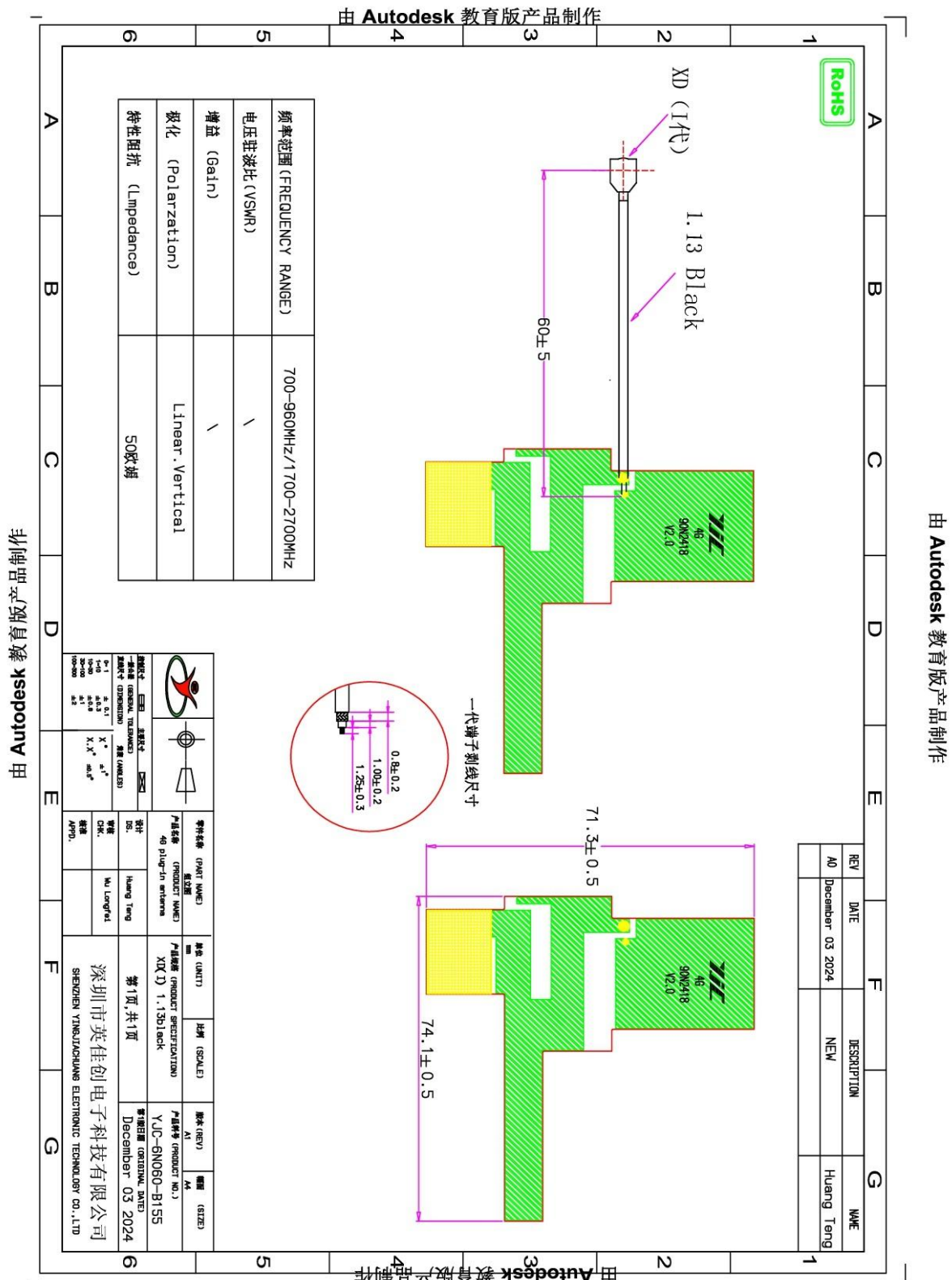


## Resumer:

| Version | Change contents and reasons | Date              | Issue |
|---------|-----------------------------|-------------------|-------|
| A0      | NEW                         | December 03, 2024 |       |
|         |                             |                   |       |
|         |                             |                   |       |
|         |                             |                   |       |
|         |                             |                   |       |
|         |                             |                   |       |
|         |                             |                   |       |
|         |                             |                   |       |
|         |                             |                   |       |
|         |                             |                   |       |
|         |                             |                   |       |



## The antenna's floor plan:





## Antenna technical parameters and environmental testing:

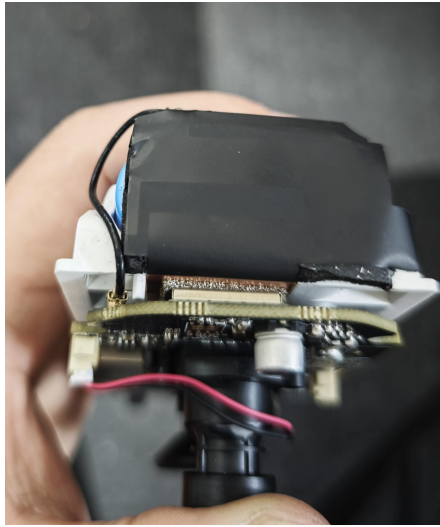
| Electrical parameters of electrical apparatus |                         |                           |           |
|-----------------------------------------------|-------------------------|---------------------------|-----------|
| Electrical Specifications                     |                         | Mechanical Specifications |           |
| Frequency Range                               | 700-960MHz/1700-2700MHz | Antenna color             | Black     |
| VSWR                                          | \                       | Interface form            | XD (I)    |
| Input Impedance                               | 50 $\Omega$             | Antenna Color             | BLACK     |
| Direction                                     | All                     | Working Temperature       | -20℃~+70℃ |
| Gain                                          | \                       | Working Humidity          | 20%~80%   |

## Environmental performance test:

| project                               | test condition                                                                                                                                                                                                             | standard                                                                                                       |
|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| Storage Conditions                    | In the absence of specified test temperature, humidity, air pressure is as follows:<br>1. Temperature is - 20 °C ~ + 70 °C<br>2. Relative humidity of 45% to 45%<br>3. Air pressure is 86 kpa to 106 kpa                   | Electrical and mechanical properties is normal                                                                 |
| high and low temperature test         | Between 70 °C and -20 °C for 5 loops, then 1-2 h under normal conditions, check the appearance quality.                                                                                                                    | Size should meet the requirements and should satisfy the content with the electrical and mechanical properties |
| Constant damp and hot resistance test | 95 + / - 3% relative humidity, temperature test: 40 °C. Lasts 2 h after, try to take out the determination of electrical properties, within 5 min after try 1-2 h under article normal thing, check the appearance quality | Size should meet the requirements and should satisfy the content with the electrical and mechanical properties |
| vibration test                        | 10-55 hz, vibration frequency range of displacement amplitude: 0.35 MM, acceleration amplitude: 50.0 M/S, sweep cycles: 30 times                                                                                           | Electrical and mechanical properties is normal                                                                 |
| fall down test                        | 1 m high altitude in accordance with the perpendicular axis free drop 3 times                                                                                                                                              | Electrical and mechanical properties is normal                                                                 |



Physical picture of antenna and attach location picture:



Antenna gain:

LTE Band 2: 3.86dBi, LTE Band 4: 3.97dBi, LTE Band 5: 4.99dBi,  
LTE Band 12: 4.99dBi, LTE Band 13: 4.99dBi, LTE Band 66: 3.97dBi



OTA active test data statistics:

(EU)

| Item | Measurement | Standard | Band           | Total  |
|------|-------------|----------|----------------|--------|
| 1    | TRP         | FDD_LTE  | FDD_B28(10MHz) | 15.57  |
| 2    | TRP         | FDD_LTE  | FDD_B28(10MHz) | 16.15  |
| 3    | TRP         | FDD_LTE  | FDD_B28(10MHz) | 16.41  |
| 4    | TIS(RSSI)   | FDD_LTE  | FDD_B28(10MHz) | -81.36 |
| 5    | TRP         | FDD_LTE  | FDD_B20(10MHz) | 16.8   |
| 6    | TRP         | FDD_LTE  | FDD_B20(10MHz) | 16.51  |
| 7    | TRP         | FDD_LTE  | FDD_B20(10MHz) | 16.35  |
| 8    | TIS(RSSI)   | FDD_LTE  | FDD_B20(10MHz) | -85.25 |
| 9    | TRP         | FDD_LTE  | FDD_B5(10MHz)  | 17.65  |
| 10   | TRP         | FDD_LTE  | FDD_B5(10MHz)  | 16.66  |
| 11   | TRP         | FDD_LTE  | FDD_B5(10MHz)  | 16.72  |
| 12   | TIS(RSSI)   | FDD_LTE  | FDD_B5(10MHz)  | -81.19 |
| 13   | TRP         | FDD_LTE  | FDD_B3(10MHz)  | 18.42  |
| 14   | TRP         | FDD_LTE  | FDD_B3(10MHz)  | 18.58  |
| 15   | TRP         | FDD_LTE  | FDD_B3(10MHz)  | 17.33  |
| 16   | TIS(RSSI)   | FDD_LTE  | FDD_B3(10MHz)  | -87.49 |
| 17   | TRP         | FDD_LTE  | FDD_B1(10MHz)  | 18.35  |
| 18   | TRP         | FDD_LTE  | FDD_B1(10MHz)  | 17.57  |
| 19   | TRP         | FDD_LTE  | FDD_B1(10MHz)  | 17.1   |
| 20   | TIS(RSSI)   | FDD_LTE  | FDD_B1(10MHz)  | -88.48 |
| 21   | TRP         | FDD_LTE  | FDD_B7(10MHz)  | 16.23  |
| 22   | TRP         | FDD_LTE  | FDD_B7(10MHz)  | 17.23  |
| 23   | TRP         | FDD_LTE  | FDD_B7(10MHz)  | 17.47  |
| 24   | TIS(RSSI)   | FDD_LTE  | FDD_B7(10MHz)  | -89.3  |

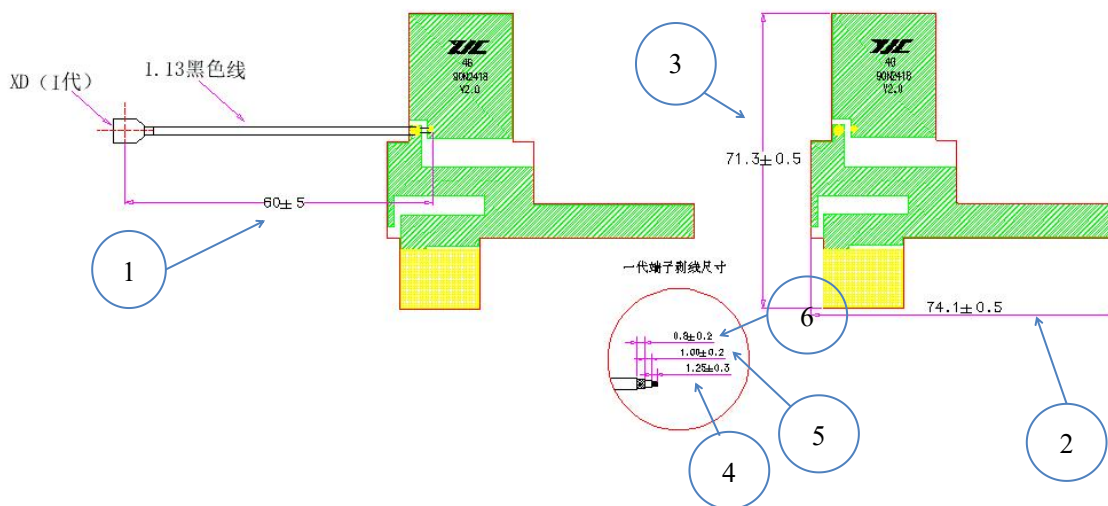


(US)

| Item | Measurement | Standard | Band           | Total  |
|------|-------------|----------|----------------|--------|
| 1    | TRP         | FDD_LTE  | FDD_B12(10MHz) | 16.94  |
| 2    | TRP         | FDD_LTE  | FDD_B12(10MHz) | 16.52  |
| 3    | TRP         | FDD_LTE  | FDD_B12(10MHz) | 15.51  |
| 4    | TIS(RSSI)   | FDD_LTE  | FDD_B12(10MHz) | -82.98 |
| 5    | TRP         | FDD_LTE  | FDD_B13(10MHz) | 17.56  |
| 6    | TIS(RSSI)   | FDD_LTE  | FDD_B13(10MHz) | -84.30 |
| 7    | TRP         | FDD_LTE  | FDD_B5(10MHz)  | 17.00  |
| 8    | TRP         | FDD_LTE  | FDD_B5(10MHz)  | 17.04  |
| 9    | TRP         | FDD_LTE  | FDD_B5(10MHz)  | 16.32  |
| 10   | TIS(RSSI)   | FDD_LTE  | FDD_B5(10MHz)  | -83.19 |
| 11   | TRP         | FDD_LTE  | FDD_B2(10MHz)  | 18.35  |
| 12   | TRP         | FDD_LTE  | FDD_B2(10MHz)  | 17.00  |
| 13   | TRP         | FDD_LTE  | FDD_B2(10MHz)  | 18.16  |
| 14   | TIS(RSSI)   | FDD_LTE  | FDD_B2(10MHz)  | -90.39 |
| 15   | TRP         | FDD_LTE  | FDD_B4(10MHz)  | 16.14  |
| 16   | TRP         | FDD_LTE  | FDD_B4(10MHz)  | 17.47  |
| 17   | TRP         | FDD_LTE  | FDD_B4(10MHz)  | 16.63  |
| 18   | TIS(RSSI)   | FDD_LTE  | FDD_B4(10MHz)  | -89.96 |
| 19   | TRP         | FDD_LTE  | FDD_B66(10MHz) | 15.89  |
| 20   | TRP         | FDD_LTE  | FDD_B66(10MHz) | 17.57  |
| 21   | TRP         | FDD_LTE  | FDD_B66(10MHz) | 17.30  |
| 22   | TIS(RSSI)   | FDD_LTE  | FDD_B66(10MHz) | -90.02 |



## Full size test report



全尺寸检测报表

| 全尺寸检测报表                                                                                                                                                                    |           |            |      |      |       |       |                        |       |       |       |          |          |        |        |          |            |     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------------|------|------|-------|-------|------------------------|-------|-------|-------|----------|----------|--------|--------|----------|------------|-----|
|                                                                                                                                                                            |           |            |      |      |       |       |                        |       |       | 测试日期  | 20241203 |          |        |        |          |            |     |
| 零件名称                                                                                                                                                                       |           | 4G FPC内置天线 |      |      | 零件图号  |       |                        |       |       |       | 模号       |          |        |        |          |            |     |
| 模具编号                                                                                                                                                                       |           |            |      |      | 零件料号  |       | YJC-6N060-B155         |       |       |       | 模穴数      | 4        |        |        |          |            |     |
| Inspection tool legend:                                                                                                                                                    |           |            |      |      |       |       |                        |       |       |       |          |          |        |        |          |            |     |
| C=Comparator    H=Height Gage    MC=Microscope    CA=Caliper    S=Smartscope<br>CM=CMM    T= Thread gage    F=Feeler gage    MI=Micrometer.    O=Other gage<br>以上检具若无可在此增加 |           |            |      |      |       |       |                        |       |       |       |          | 尺寸个数     | NG尺寸个数 | 重点尺寸个数 | NG重点尺寸个数 |            |     |
|                                                                                                                                                                            |           |            |      |      |       |       |                        |       |       |       |          | 6        | 0      | 6      | 0        |            |     |
|                                                                                                                                                                            |           |            |      |      |       |       |                        |       |       |       |          | 制表       | ×××    | 审核     | ×××      | 核准         | ××× |
| 序号                                                                                                                                                                         | 重点尺寸(Y/N) | 规格         | 上公差  | 下公差  | 尺寸上限  | 尺寸下限  | 对应模穴号产品实测值（红色字体代表尺寸超差） |       |       |       | 判定       | NG尺寸评估状态 |        |        | 客户回复     |            |     |
|                                                                                                                                                                            |           |            |      |      |       |       | 模穴#1                   | 模穴#2  | 模穴#3  | 模穴#4  |          | 原因分析     | 改善对策   | 计划完成时间 | 检具       | 客户工程师: XXX |     |
|                                                                                                                                                                            |           |            |      |      |       |       |                        |       |       |       |          |          |        |        |          |            |     |
| 1                                                                                                                                                                          | Y         | 60.00      | 5.00 | 5.00 | 65.00 | 55.00 | 61.00                  | 60.20 | 60.50 | 60.80 | OK       |          |        |        | 接受       |            |     |
| 2                                                                                                                                                                          | Y         | 74.10      | 0.50 | 0.50 | 74.60 | 73.60 | 74.18                  | 74.09 | 74.13 | 74.08 | OK       |          |        |        |          |            |     |
| 3                                                                                                                                                                          | Y         | 71.30      | 0.50 | 0.50 | 71.80 | 70.80 | 71.36                  | 71.26 | 71.29 | 71.81 | OK       |          |        |        |          |            |     |
| 4                                                                                                                                                                          | Y         | 1.25       | 0.30 | 0.30 | 1.55  | 0.95  | 1.29                   | 1.30  | 1.29  | 1.28  | OK       |          |        |        |          |            |     |
| 5                                                                                                                                                                          | Y         | 1.00       | 0.20 | 0.20 | 1.25  | 0.85  | 1.03                   | 1.05  | 1.02  | 1.01  | OK       |          |        |        |          |            |     |
| 6                                                                                                                                                                          | Y         | 0.80       | 0.20 | 0.20 | 1.20  | 0.80  | 0.86                   | 0.85  | 0.83  | 0.84  | OK       |          |        |        |          |            |     |