



SHENZHEN YINGJIACHUANG TECHNOLOGY ELECTRONIC CO. LTD

<http://www.szsyjc.com>

# APPROVAL SHEET

|                   |                                |             |
|-------------------|--------------------------------|-------------|
| CUSTOMER NAME     |                                |             |
| CUSTOMER P/N      | H. DZ. SJ. TX. 00026           |             |
| PART NAME         | 2.4G/5.8G black rubber antenna |             |
| P/ N              | YJC-60302-B30                  |             |
| APPROVAL REV.     | A0                             |             |
| DELIVERY DATE     | February 23, 2023              |             |
| PREPARED BY       | Wu Jiaxiong                    |             |
| CHECKED BY        | Fang Wenfeng                   |             |
| APPROVED BY       |                                |             |
| Customer Approved |                                |             |
| Approved By       | Checked By                     | Prepared By |
|                   |                                |             |

Contact Information (factory) :

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

Hangzhou Office: 212, Building B, Dahua Jianghong International Innovation Park, No. 369, Internet of Things Street, Binjiang District, Hangzhou

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

Company website: <http://www.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 technical parameters     | 5   |
| 6. Environmental performance test   | 5   |
| 7. Antenna diagram                  | 6   |
| 8. Antenna performance test diagram | 6   |
| 9. 2D、3D(2.4G/5G)Test data          | 7-9 |
| 10. ROHS Material control report    | 10  |



## Resumer:

| Version | Change contents and reasons | Date             | Issue |
|---------|-----------------------------|------------------|-------|
| A/0     | Initial release             | October 14, 2021 |       |
|         |                             |                  |       |
|         |                             |                  |       |
|         |                             |                  |       |
|         |                             |                  |       |
|         |                             |                  |       |
|         |                             |                  |       |
|         |                             |                  |       |
|         |                             |                  |       |
|         |                             |                  |       |
|         |                             |                  |       |

由 Autodesk 教育版产品制作

由 Autodesk 教育版产品制作

## Antenna technical parameters and environmental testing:

| Electrical parameters of electrical apparatus |                         |                           |           |
|-----------------------------------------------|-------------------------|---------------------------|-----------|
| Electrical Specifications                     |                         | Mechanical Specifications |           |
| Frequency Range                               | 2400-2500/5150-5850M Hz | Antenna Color             | Black     |
| VSWR                                          | <1.92                   | Input connector           | SMA       |
| Input Impedance                               | 50 $\Omega$             | Antenna length            | 37 mm     |
| Direction                                     | All                     | Working Temperature       | -20℃~+70℃ |
| Gain                                          | 3 dBi                   | 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 antenna picture:



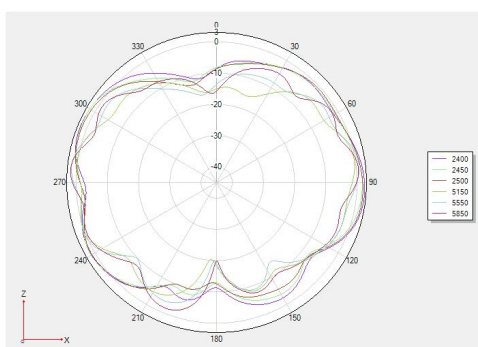
Antenna performance test diagram:



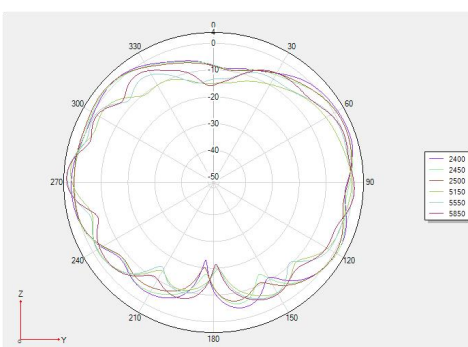
## 2D、3D(2.4G/5G)Antenna pattern testing:

| Frequency (MHz) | Efficiency (%) | Gain. (dBi) |
|-----------------|----------------|-------------|
| 2400MHz         | 76.18          | 3.24        |
| 2410MHz         | 78.36          | 3.28        |
| 2420MHz         | 76.68          | 2.95        |
| 2430MHz         | 76.31          | 3.32        |
| 2440MHz         | 76.69          | 3.32        |
| 2450MHz         | 81.91          | 3.28        |
| 2460MHz         | 78.35          | 2.86        |
| 2470MHz         | 76.46          | 3.23        |
| 2480MHz         | 77.36          | 3.11        |
| 2490MHz         | 80.25          | 3.28        |
| 2500MHz         | 80.43          | 3.19        |
| 5150MHz         | 81.13          | 3.29        |
| 5250MHz         | 77.87          | 3.27        |
| 5350MHz         | 81.48          | 3.35        |
| 5450MHz         | 77.65          | 2.92        |
| 5550MHz         | 81.51          | 3.17        |
| 5650MHz         | 80.53          | 3.09        |
| 5750MHz         | 74.15          | 2.91        |
| 5850MHz         | 74.67          | 2.93        |

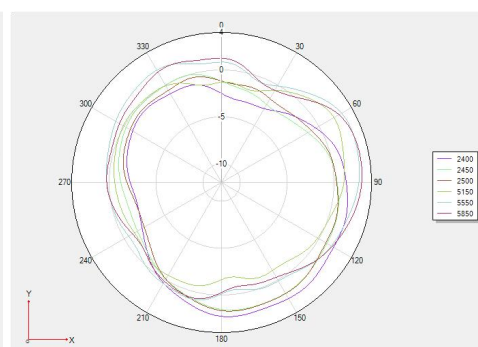
Phi 0 2D 图:



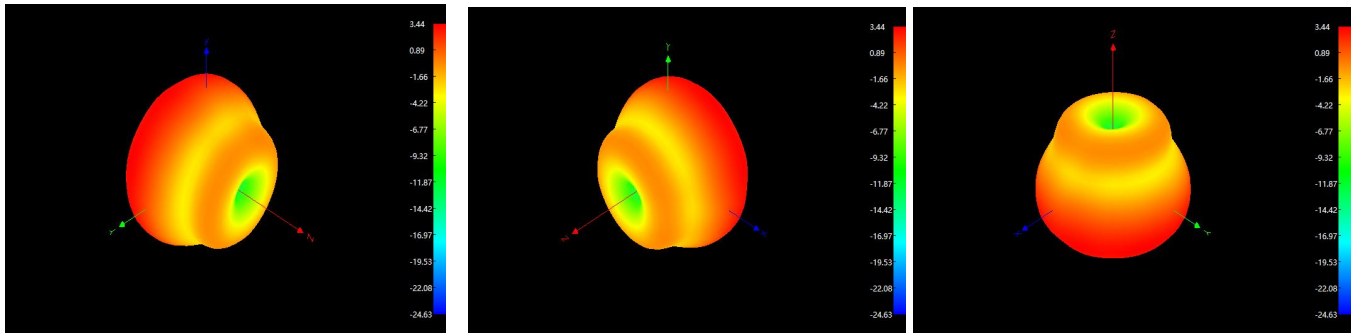
Phi 90 2D 图



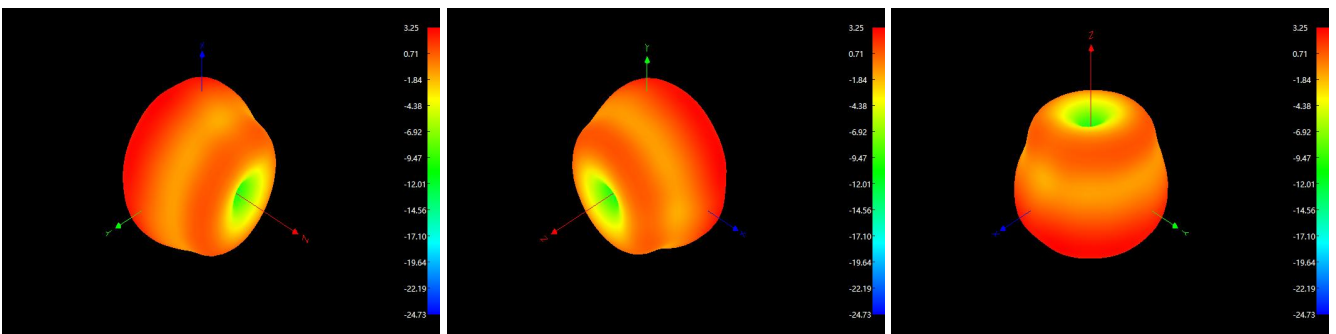
Theta 90 2D 图



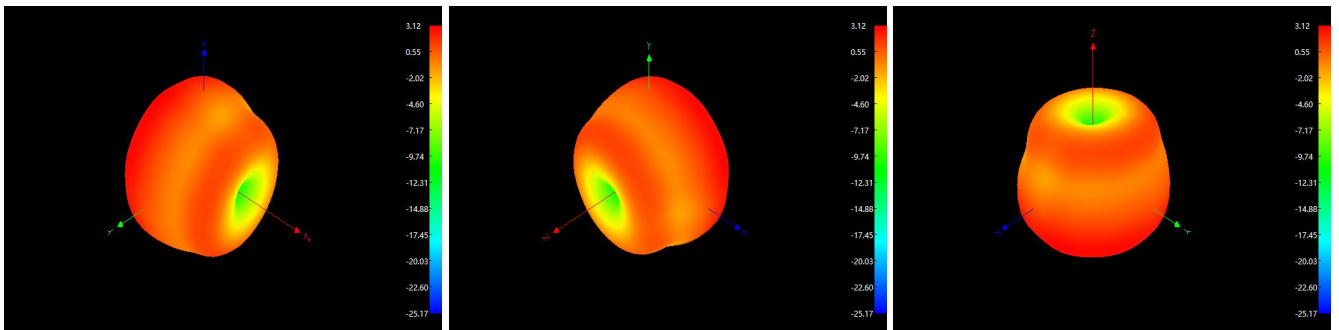
### 3D 2400:



### 3D 2450:

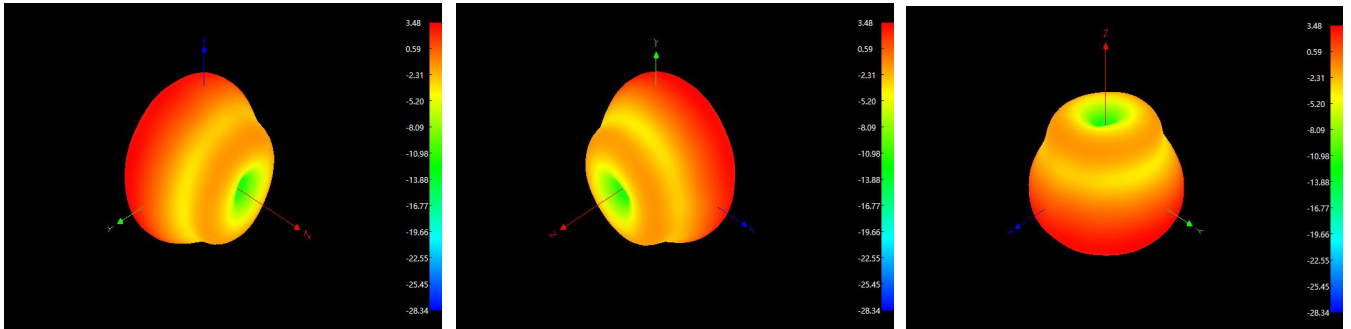


### 3D 2500:

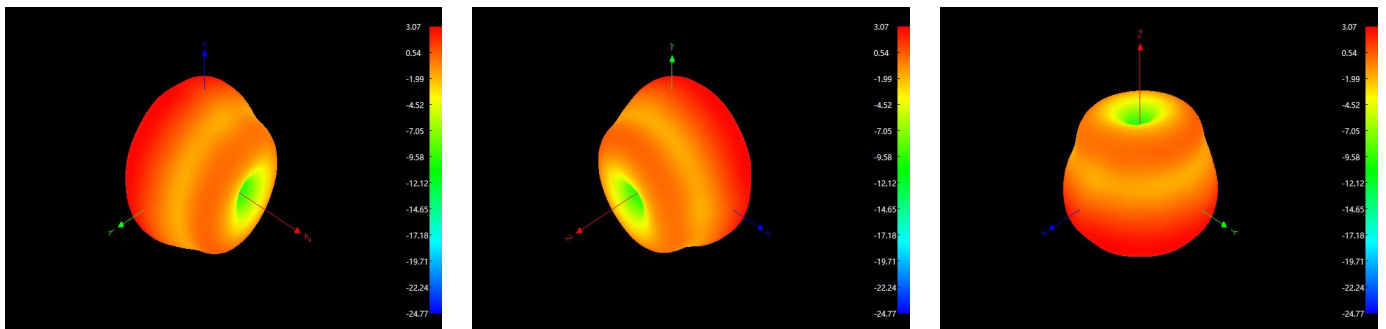




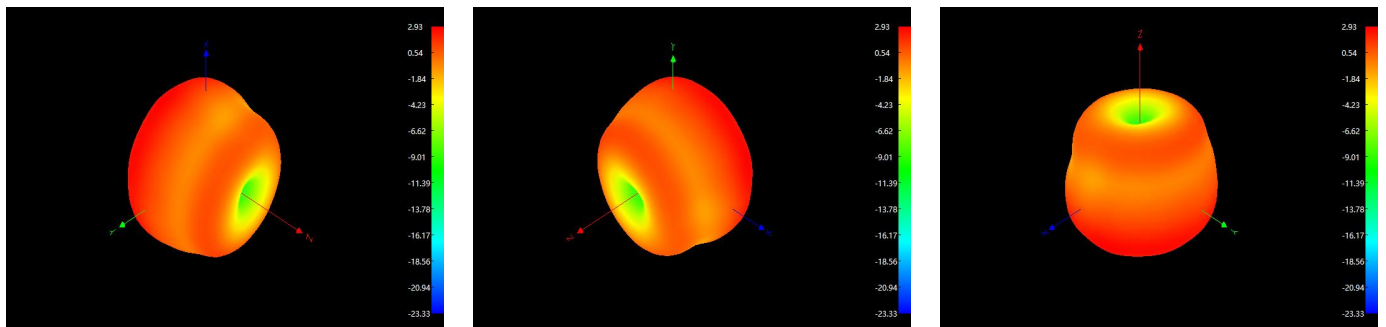
3D 5150:



3D5550:



3D5850:





## Material RoHS conformity declaration form

This is to certify that the delivery to your company's components, raw materials, auxiliary materials used and the additives in the production engineering are accord with RoHS environmental requirements of the restrictions on the use of hazardous substances directive (RoHS directive 2011/65 / EU)

About components used raw materials, packaging materials, auxiliary materials and additives used in the production process such as composition of the report is as follows:

| Component<br>/Part Name             | Material<br>Composition             | ICP report #     | Test Org. | Test Date | Content of harmful substances (ppm) |     |    |                  |     |      | PASS? |
|-------------------------------------|-------------------------------------|------------------|-----------|-----------|-------------------------------------|-----|----|------------------|-----|------|-------|
|                                     |                                     |                  |           |           | Cd                                  | Pb  | Hg | Cr <sup>6+</sup> | PBB | PBDE | PASS  |
| spring                              | copper                              | CANEC2219550104  | SGS       | 22/09/16  | ND                                  | 20  | ND | ND               | ND  | ND   | PASS  |
| Plastic parts                       | ABS                                 | 238539448h001    | TUV       | 22/02/17  | ND                                  | ND  | ND | ND               | ND  | ND   | PASS  |
| Environment-<br>friendly<br>tinwire | Environment<br>-friendly<br>tinwire | SHAEC2206174502  | SGS       | 22/06/13  | ND                                  | 181 | ND | ND               | ND  | ND   | PASS  |
| SMA                                 | Rubber core                         | SHAEC22000767001 | SGS       | 22/08/23  | ND                                  | ND  | ND | ND               | ND  | ND   | PASS  |
|                                     | Zinc alloy                          | SZXML2200496902  | SGS       | 22/03/09  | ND                                  | 19  | ND | ND               | ND  | ND   | PASS  |
|                                     | Gold coating                        | SZXML2201289201  | SGS       | 22/05/09  | ND                                  | 13  | ND | ND               | ND  | ND   | PASS  |