

## SPECIFICATION FOR APPROVAL

|                    |                                         |
|--------------------|-----------------------------------------|
| <b>CUSTOMER :</b>  | yuanchuan                               |
| <b>PART NAME :</b> | External dual band wifi antenna L=194mm |
| <b>PART NO. :</b>  |                                         |
| <b>DZZ NO. :</b>   | N12-7417-R0A                            |
| <b>REV. :</b>      | 1.0                                     |

|                         |                                    |                               |
|-------------------------|------------------------------------|-------------------------------|
|                         | <b>MANUFACTURERR<br/>SIGNATURE</b> | <b>CUSTOMER<br/>SIGNATURE</b> |
| <b>APPROVED<br/>BY:</b> |                                    |                               |
| <b>DATE:</b>            |                                    |                               |

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# PCB Antenna Assembly

## Specification(With housing)

### 1.Electrical Properties

- 1.1 Frequency range.....2400~2500MHz&5150~5850MHz
- 1.2 Impedance.....50Ω Norminal
- 1.3 VSWR (Matching Transmit Trace on board) ...≤2
- 1.4 Radiation.....Omni
- 1.5 Gain(Peak).....3dBi
- 1.6 Polarization.....Linear
- 1.7 Admitted Power.....1W
- 1.8 Cable.....Φ1.37 cable
- 1.9 Connector.....CCT-1

### 2.Physical Properties

- 2.1 Working Temperature.....-30°C ~ +75°C
- 2.2 Storage Temperature.....-30°C ~ +75°C

# **Antenna Design for External dual band wifi antenna L=194mm V1.0**

|                                     |                     |
|-------------------------------------|---------------------|
| <b>Document Number</b>              | <b>DZZ-20230913</b> |
| <b>1<sup>st</sup> Released Date</b> | <b>13/09/2023</b>   |
| <b>Author</b>                       | <b>Huiping Feng</b> |
| <b>Review By</b>                    | <b>Huiping Feng</b> |

# Revised History

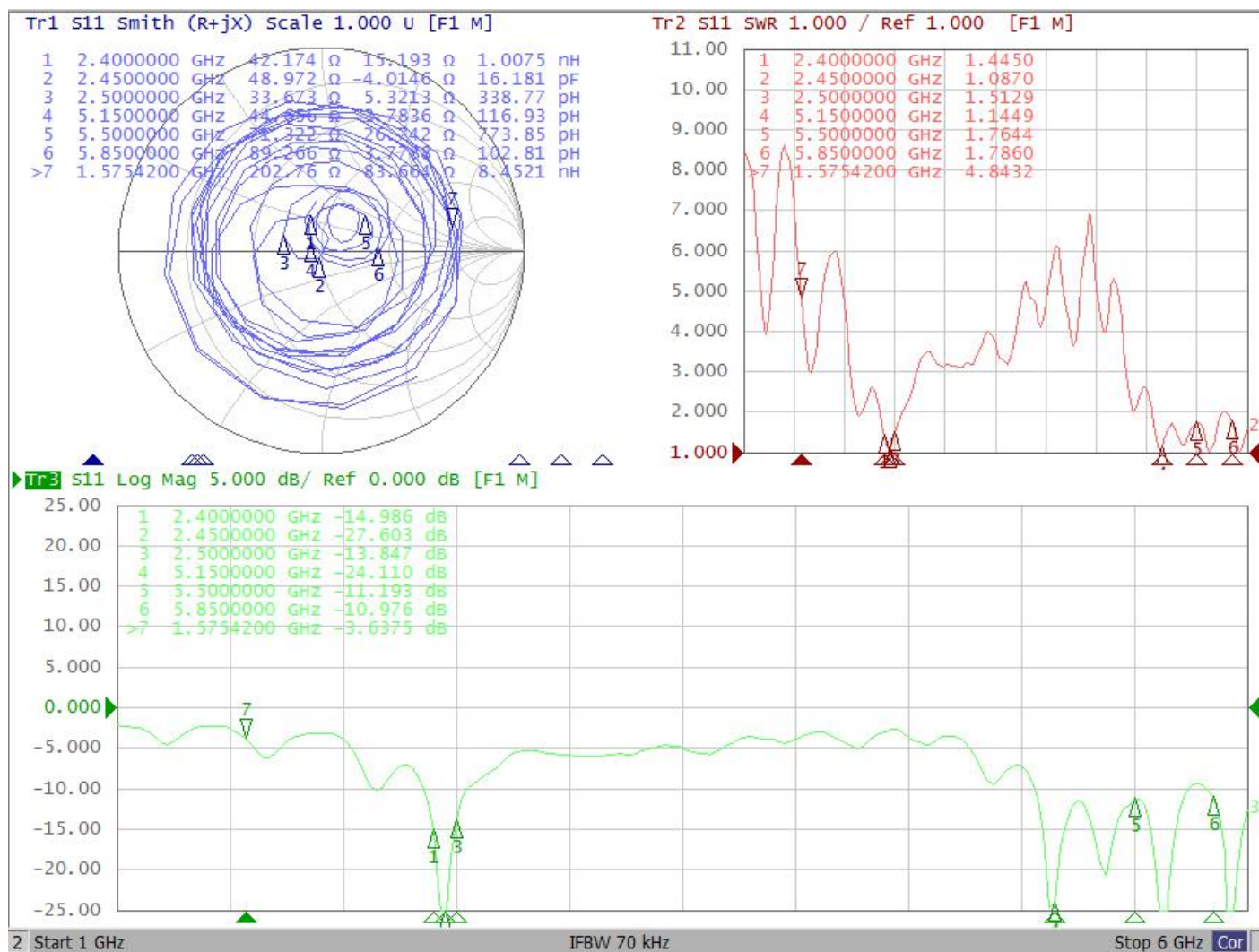
[illegible]

## Specification

|                          |                                             |
|--------------------------|---------------------------------------------|
| <b>Rough description</b> | <b>2.4G /5G ANT</b>                         |
| <b>Item</b>              | <b>Initial Specification</b>                |
| <b>Impedance</b>         | <b>50Ω Norminal</b>                         |
| <b>Test environment</b>  | <b>With housing</b>                         |
| <b>Spectrum</b>          | <b>None</b>                                 |
| <b>Frequency range</b>   | <b>2400~2500MHz&amp;5150~5850MHz</b>        |
| <b>Antenna Type</b>      | <b>Dipole</b>                               |
| <b>VSWR</b>              | <b>(Matching Transmit Trace on board)≤2</b> |
| <b>Gain(Peak)</b>        | <b>3dBi</b>                                 |
| <b>Radiation</b>         | <b>Omni</b>                                 |
| <b>Polarization</b>      | <b>Linear</b>                               |
| <b>Rad. efficiency</b>   | <b>≥60%</b>                                 |
| <b>Power</b>             | <b>1W</b>                                   |
| <b>Connector Type</b>    | <b>CCT</b>                                  |
| <b>Cable Type</b>        | <b>Φ1.37 coaxial cable</b>                  |
| <b>Cable Length</b>      | <b>grey L=194mm</b>                         |
| <b>Isolation</b>         | <b>None</b>                                 |

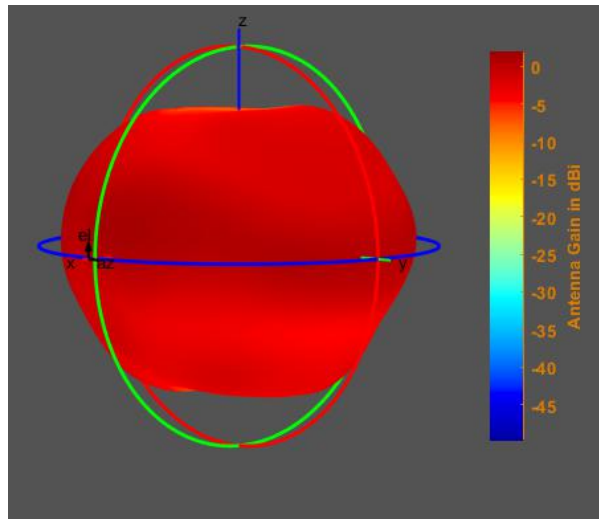
# 1. Passive

## 1.1 S11 VSWR Smith test results

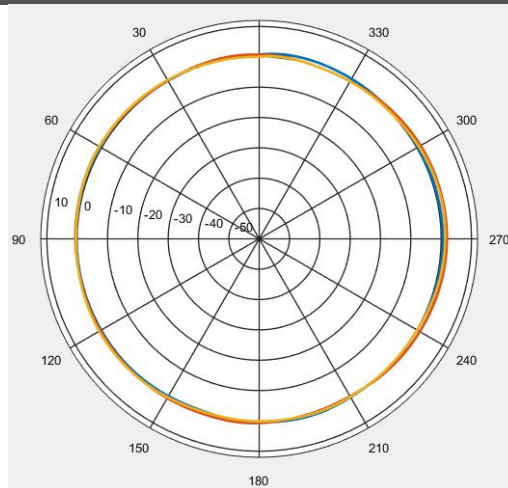


## 1.2 2.4G radiation pattern

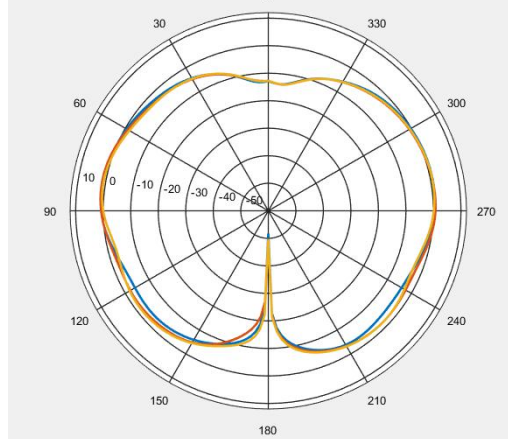
2.45GHz



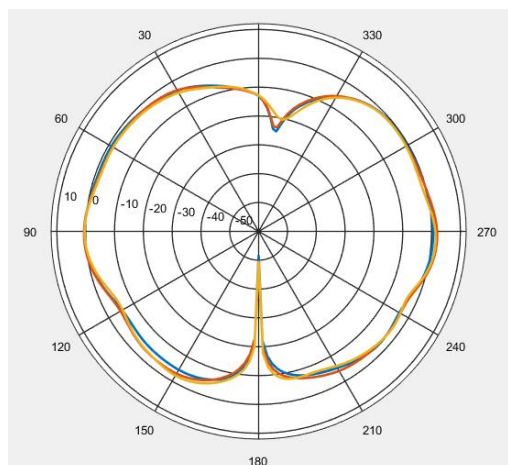
X-Y



X-Z



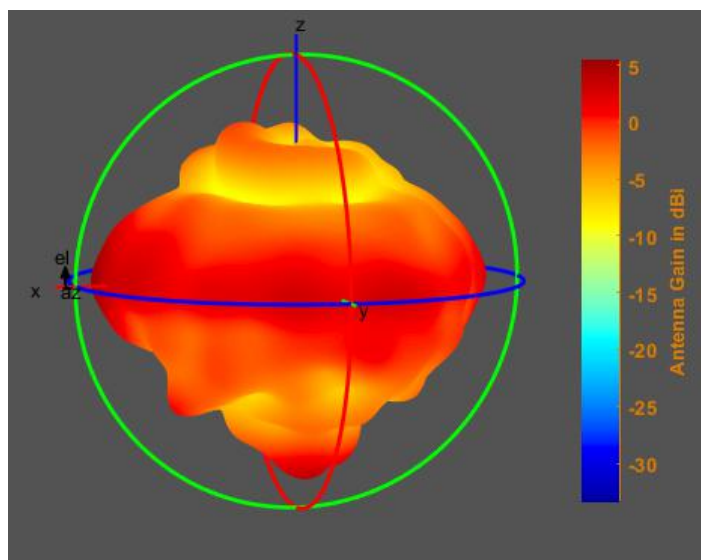
Y-Z



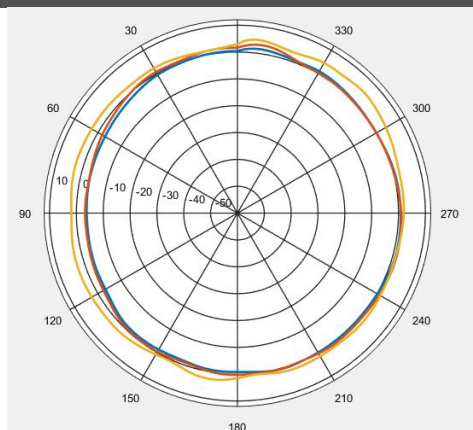


## 1.3 5G radiation pattern

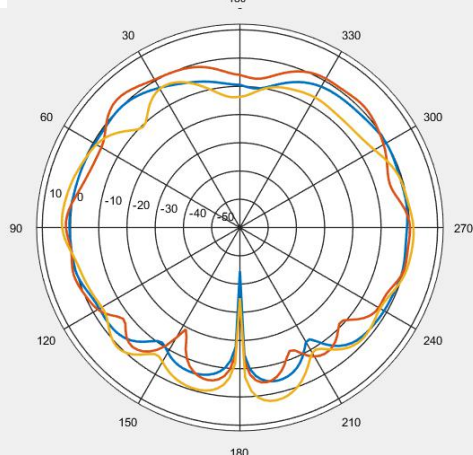
5.5GHz



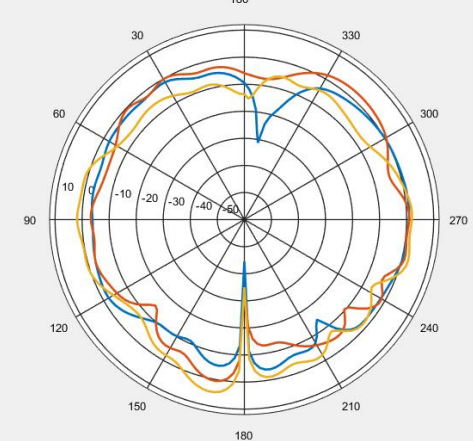
X-Y



X-Z



Y-Z



## 1.4 2.4G 5G Effi

| Freq  | Effi  | Gain  | Freq  | Effi  | Gain  |
|-------|-------|-------|-------|-------|-------|
| (MHz) | (%%)  | (dBi) | (MHz) | (%%)  | (dBi) |
| 2400  | 72.8  | 2.89  | 5100  | 68.29 | 2.57  |
| 2410  | 72.91 | 2.76  | 5200  | 69.35 | 2.91  |
| 2420  | 73.11 | 2.98  | 5300  | 71.58 | 2.94  |
| 2430  | 73.26 | 3.03  | 5400  | 72.15 | 2.99  |
| 2440  | 74.75 | 3.05  | 5500  | 71.65 | 3.12  |
| 2450  | 75.29 | 3.14  | 5600  | 70.21 | 3.25  |
| 2460  | 74.77 | 3.12  | 5700  | 69.12 | 3.40  |
| 2470  | 73.98 | 3.13  | 5800  | 68.08 | 3.61  |
| 2480  | 73.59 | 3.00  | 5900  | 68.50 | 3.71  |
| 2490  | 72.55 | 2.98  |       |       |       |
| 2500  | 71.29 | 2.99  |       |       |       |



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# Product packaging specification

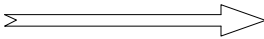
date: 2023.9.11

page: 1 of 1

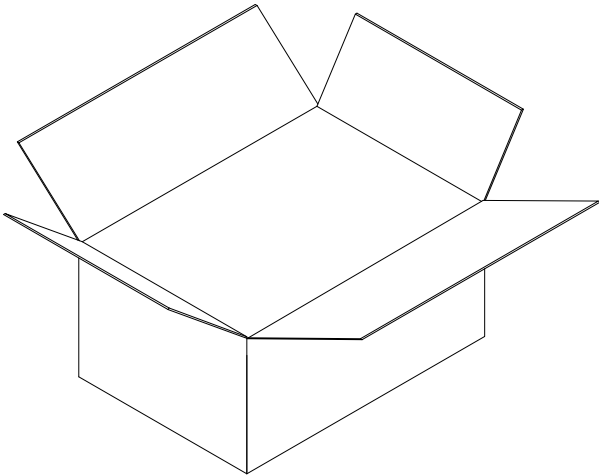
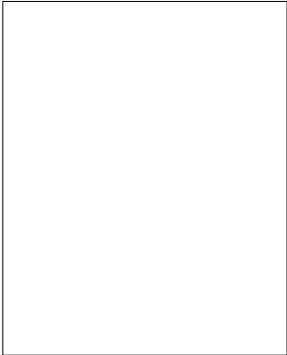
版本: A

Product name: External antenna

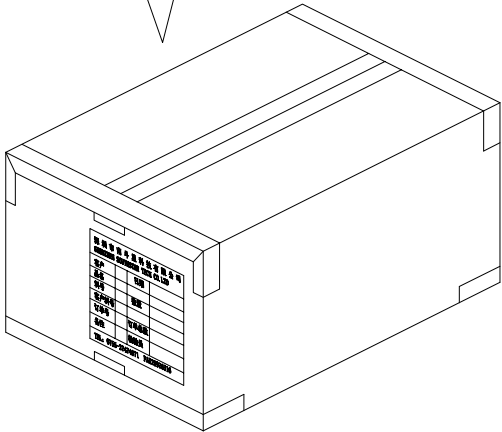
一: Finished antenna



Two: Put it in a PE bag



4. The actual packing shall prevail



Four: The box is sealed, and the outer box is affixed with our production label and ROHS label.

批准: \_\_\_\_\_

确认: \_\_\_\_\_

拟制: tianjin

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11.11.2023 14:11:23