



# Antenna Specification

Manufacture: TUYA

Product Name: ZPU-Pro Antenna

Antenna Type: PCB

Test Date: 2024.4.15

Tested by: XXX

Approved by: Licco

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## 1.General Description

|                |                                                                                                |
|----------------|------------------------------------------------------------------------------------------------|
| Manufacturer   | Hangzhou Tuya Information Technology Co.,Ltd                                                   |
| Address        | Room 701,Building 3,More Center,No.87 GuDun Road,<br>Hangzhou, Zhejiang,China                  |
| Test Location  | Room 106, Building 3, Letong Science Park, No. 500,<br>Qiuyi Road, Binjiang District, Hangzhou |
| Product Name   | ZPU-Pro Antenna                                                                                |
| Product model  | ZPU-Pro                                                                                        |
| Antenna Type   | PCB Antenna                                                                                    |
| Test Items     | Gain; Efficiency; Radiation Pattern                                                            |
| Test Frequency | 2400-2500MHz                                                                                   |
| Test Standard  | ANSI/IEEE Std 149-1979                                                                         |

## 2.Test Configurations

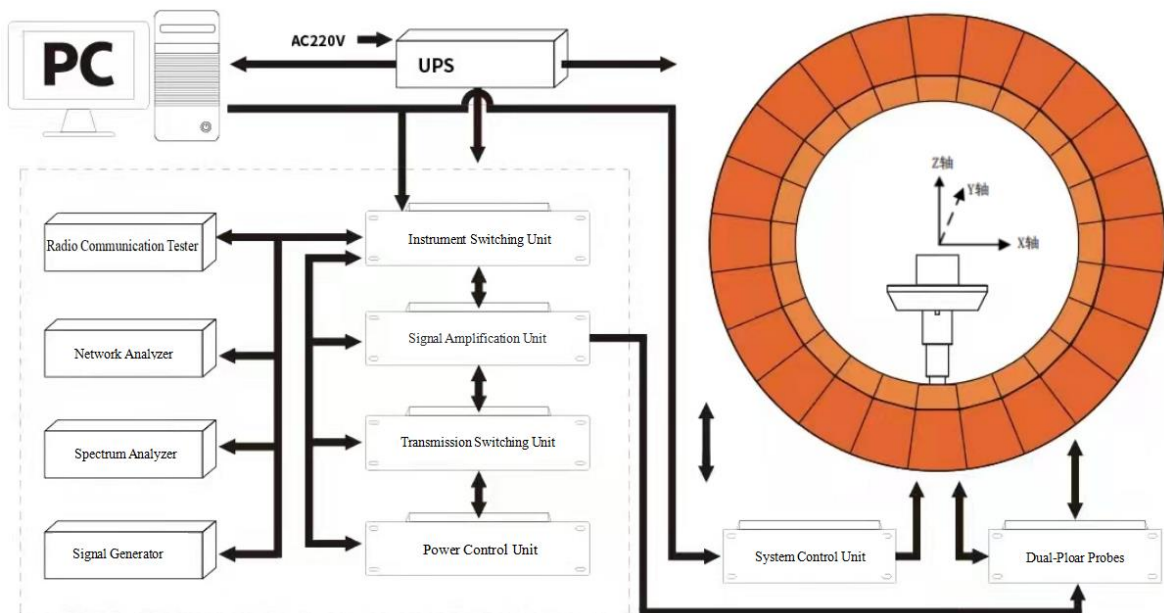
### 2.1 Test Environment

|                            |       |
|----------------------------|-------|
| Temperature (°C)           | 25    |
| Humidity (%RH)             | 60    |
| Atmospheric Pressure (kPa) | 100.5 |

### 2.2 Test Equipment

|                 |                                      |
|-----------------|--------------------------------------|
| Test System     | TEM 24 Multi-probe Microwave Chamber |
| Test Instrument | Agilent E5071B                       |

### 2.3 Test Principle





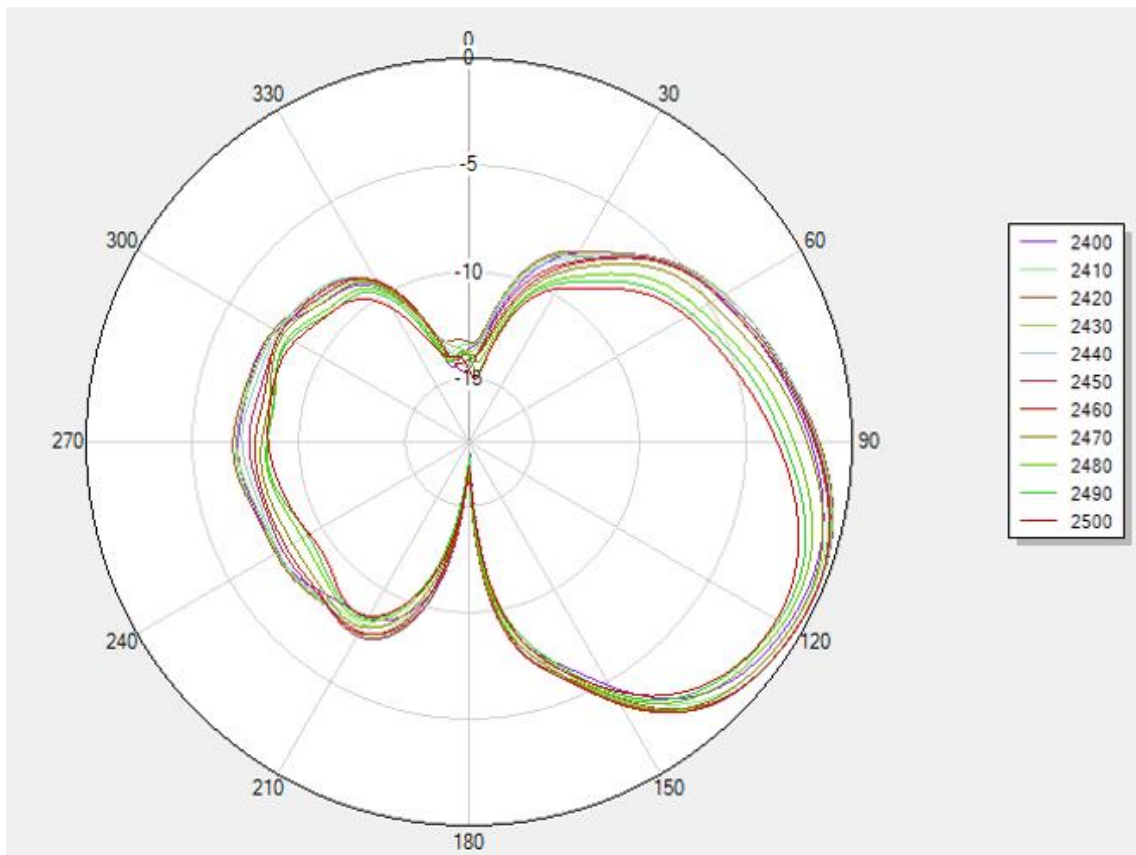
## 3.Test Results

### 3.1 Gain and Efficiency

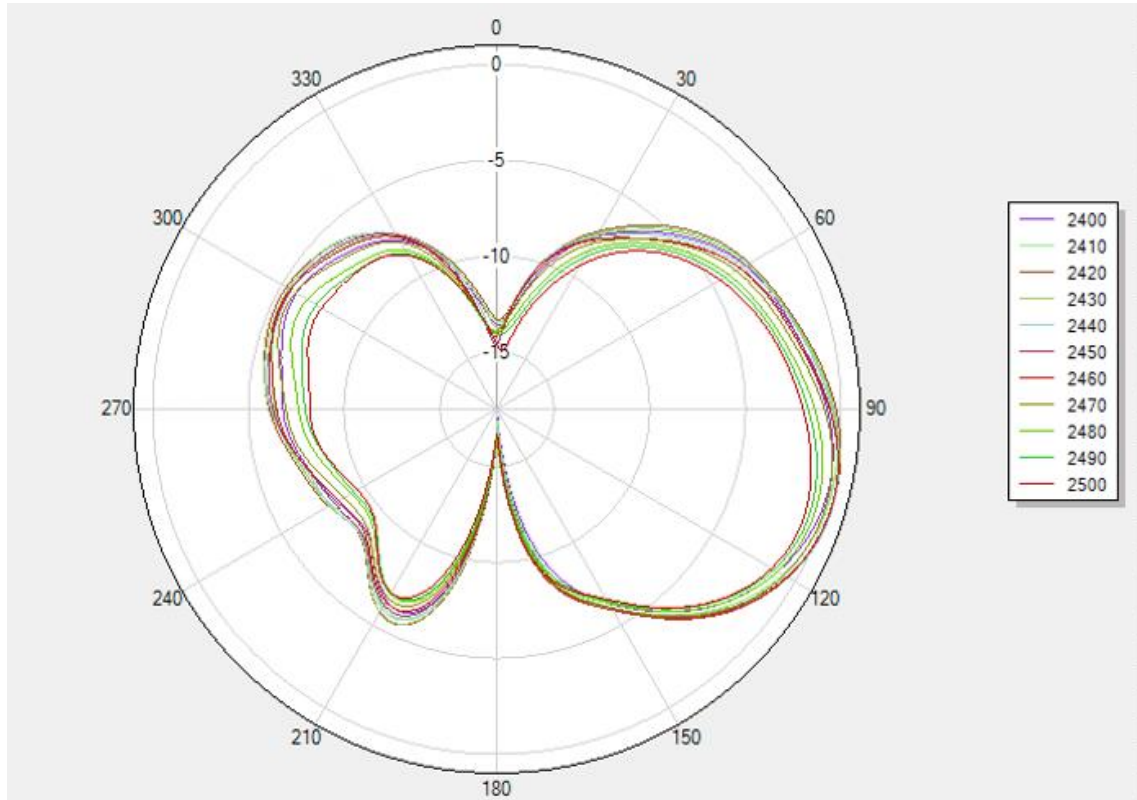
| Frequency (MHz) | Peak Gain (dBi) | Efficiency (%) |
|-----------------|-----------------|----------------|
| 2400            | 0.18            | 40.18          |
| 2410            | 0.38            | 41.69          |
| 2420            | 0.56            | 42.17          |
| 2430            | 0.53            | 41.5           |
| 2440            | 0.49            | 41.02          |
| 2450            | 0.4             | 41.21          |
| 2460            | 0.41            | 39.54          |
| 2470            | 0.2             | 36.56          |
| 2480            | -0.2            | 33.73          |
| 2490            | -0.42           | 30.83          |
| 2500            | -0.63           | 29.65          |

## 3.2 Radiation Pattern

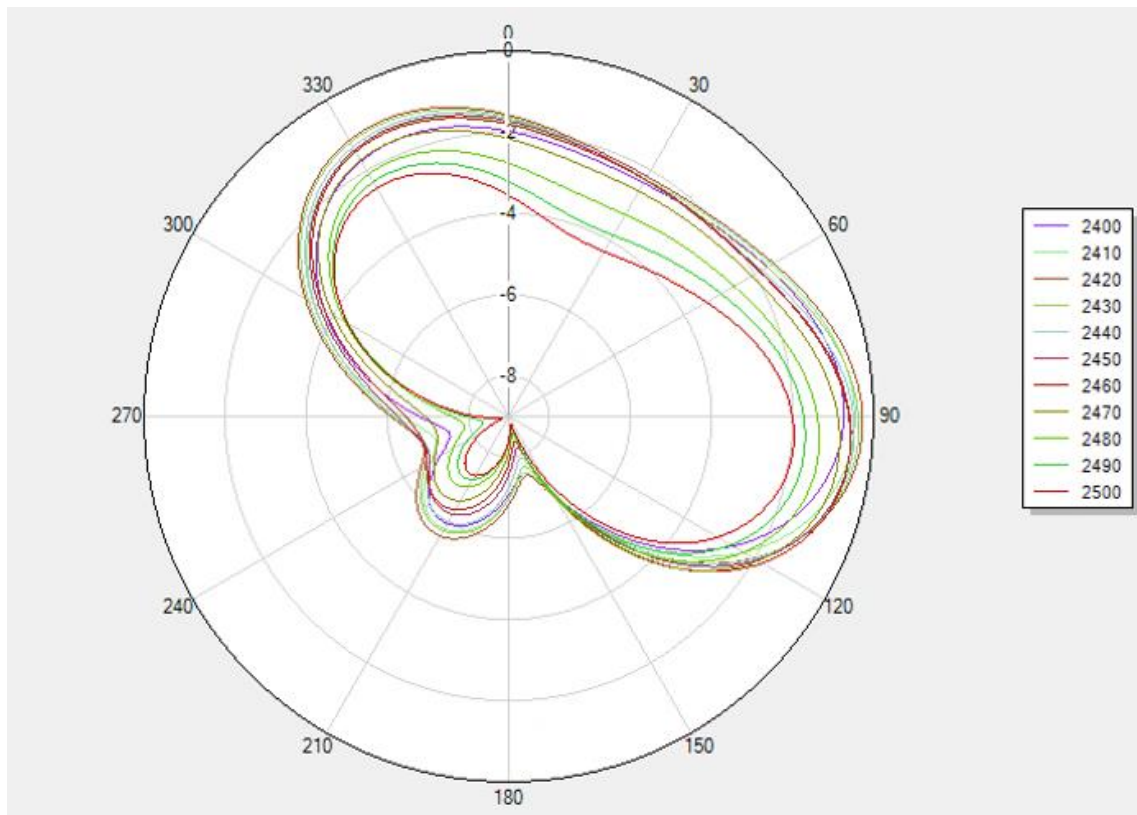
Phi 0 2D



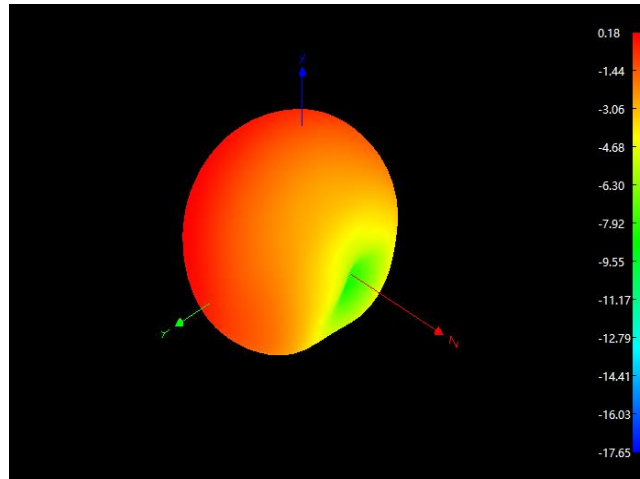
Phi 90 2D



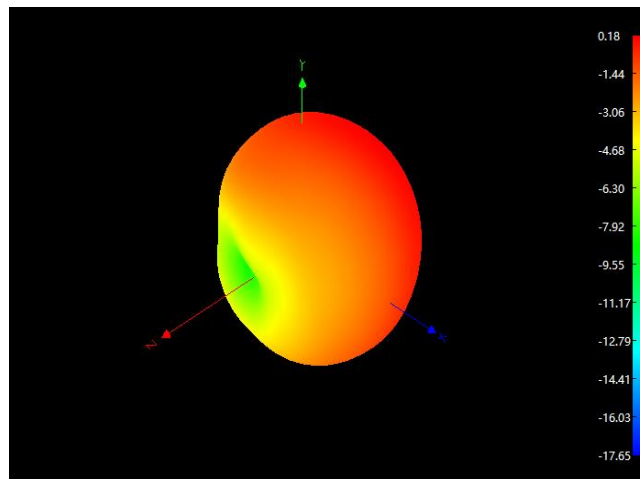
Theta 90 2D



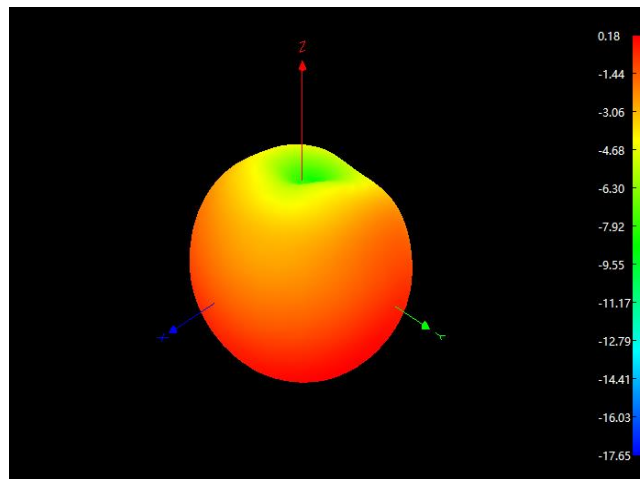
2400MHz 3D  
放类似图 Z 轴朝上



2450MHz 3D

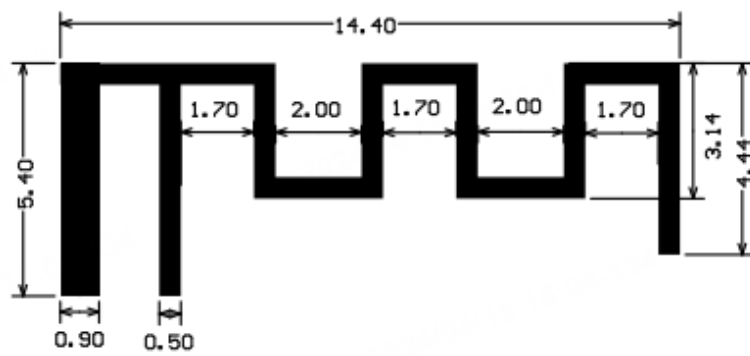


2500MHz 3D



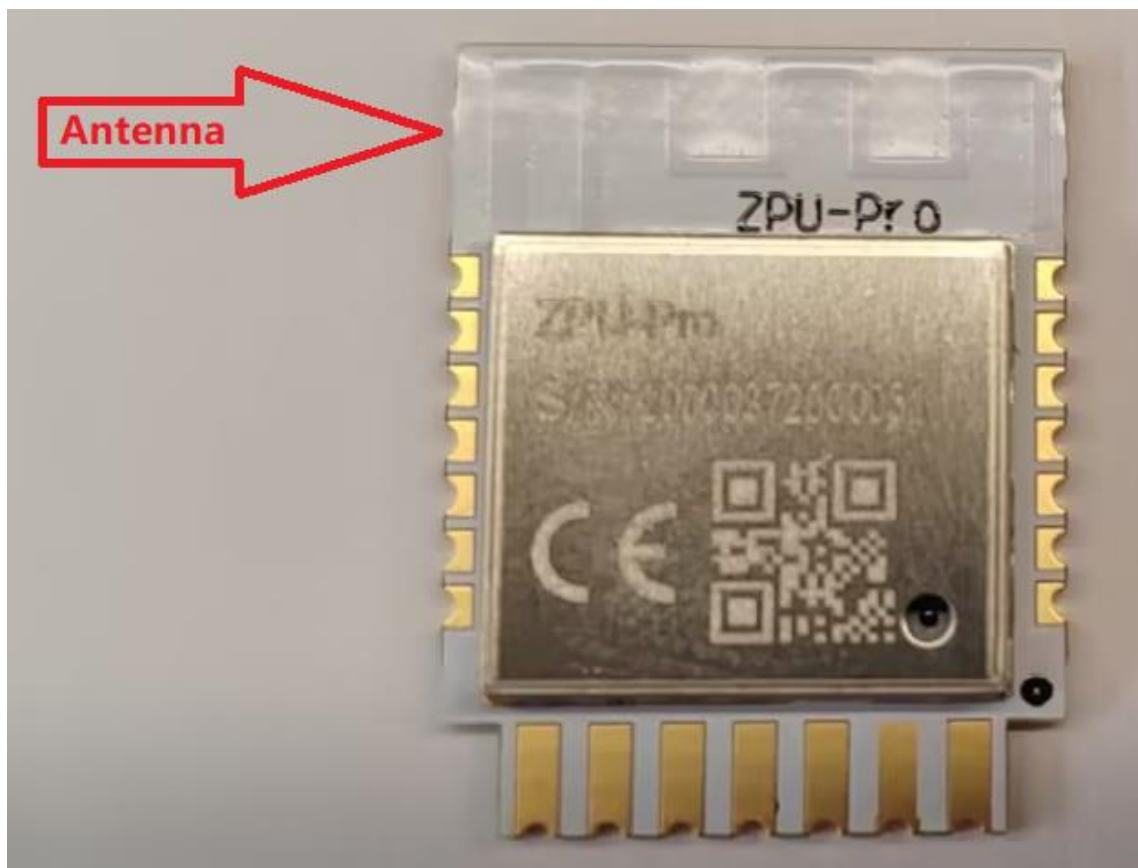
## 4. Antenna Dimensions





单位: mm

## 5.EUT Photo



## 6.Test Setup Photo

