



# Antenna Specification

Manufacture: TUYA

Model: WBRG1

Antenna Type: PCB

Test Date: 2021.03.17

Tested by: Quan Cai

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   | WBRG1 Antenna  |
| Product model  | WBRG1  |
| Antenna Type   | PCB Antenna  |
| Test Items     | Gain; Efficiency; Radiation Pattern  |
| Test Frequency | 2400-2500MHz   |
| Test Standard  | ANSI/IEEE Std 149-1979   |

## 2. Test Configurations

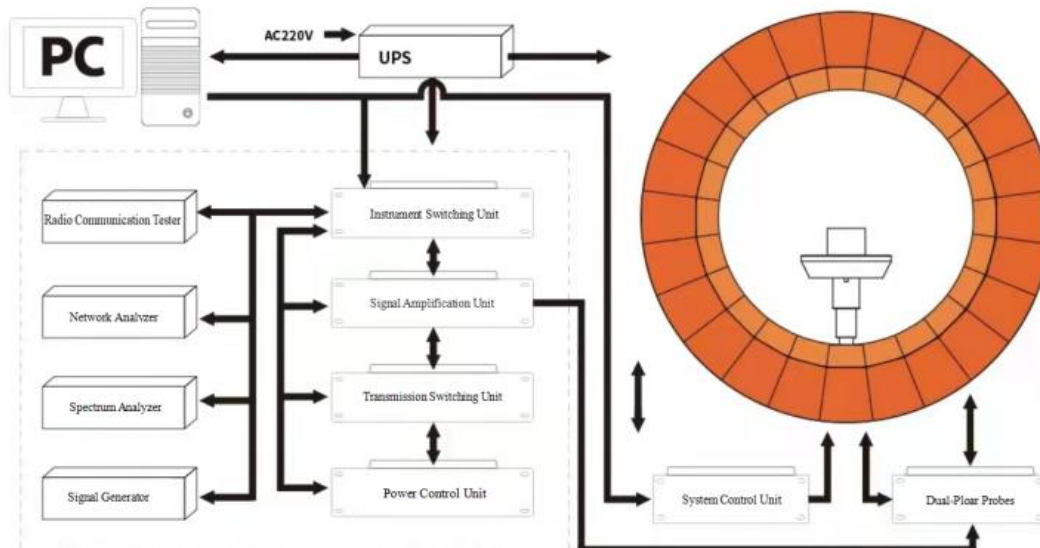
### 2.1 Test Environment

|                            |       |
|----------------------------|-------|
| 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





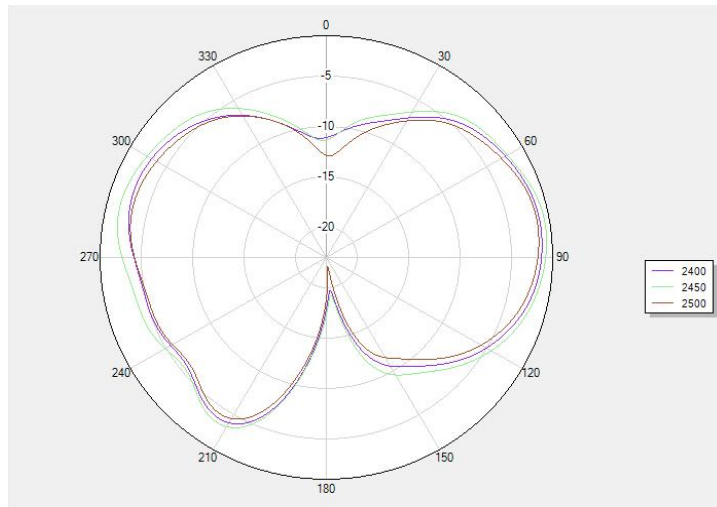
## 3.Test Results

### 3.1 Gain and Efficiency

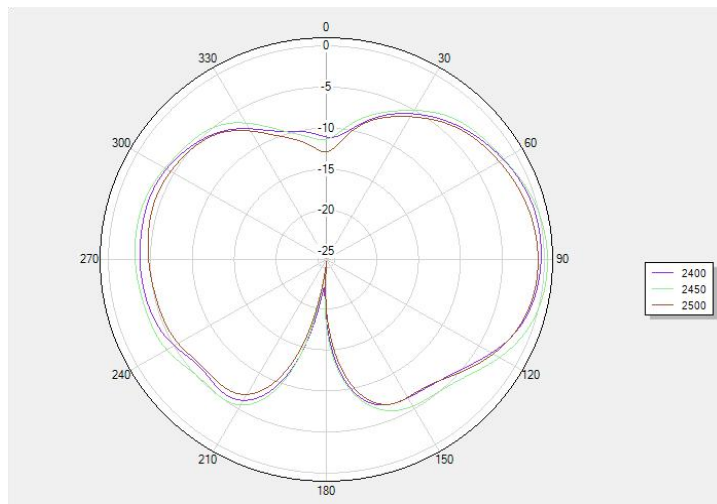
| Frequency (MHz) | Peak Gain (dBi) | Efficiency (%) |
|-----------------|-----------------|----------------|
| 2400            | 0.3             | 44.77          |
| 2410            | 0.7             | 46.88          |
| 2420            | 0.85            | 48.64          |
| 2430            | 0.86            | 48.53          |
| 2440            | 0.85            | 48.64          |
| 2450            | 1.05            | 50.23          |
| 2460            | 0.92            | 48.87          |
| 2470            | 0.71            | 44.98          |
| 2480            | 0.59            | 40.83          |
| 2490            | 0.32            | 37.84          |
| 2500            | 0.25            | 37.33          |

### 3.2 Radiation Pattern

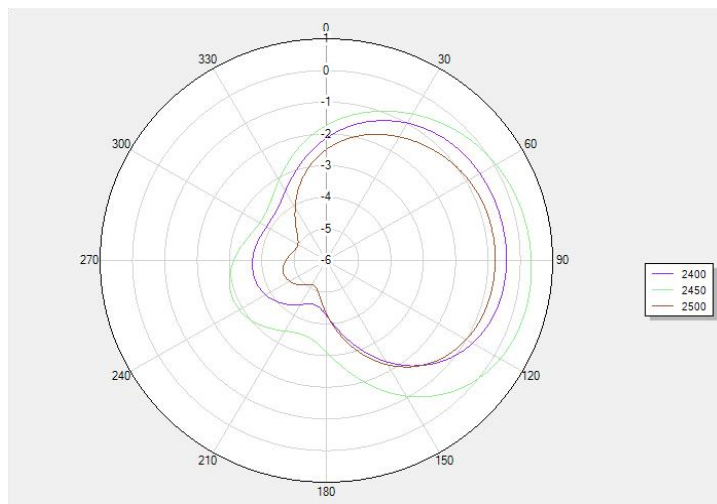
Phi 0 2D



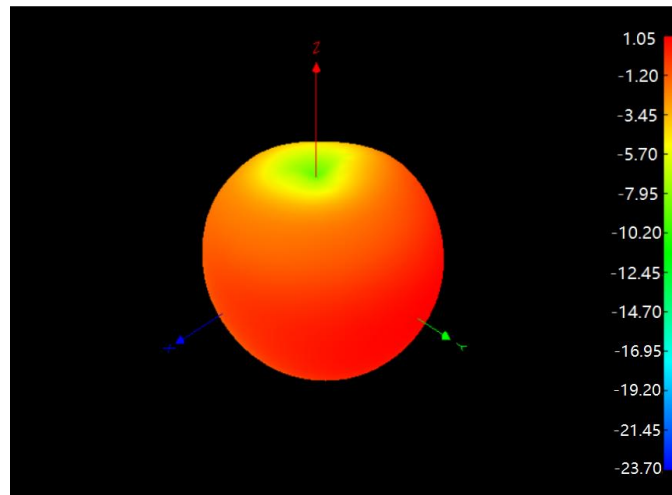
Phi 90 2D



Theta 90 2D

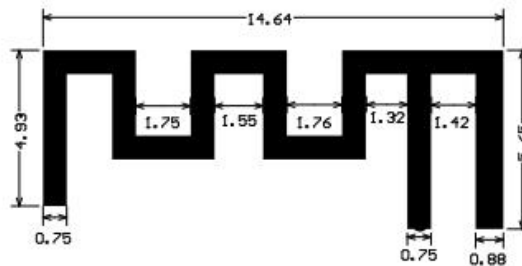


2450MHz 3D



#### 4. Antenna Dimensions

Unit: mm



#### 5. EUT Photo



## 6.Test Setup Photo

