



# Antenna Specification

Manufacture: TUYA

Product Name: WBR1 Antenna

Antenna Type: PCB

Test Date: 2019.05.20

Tested by: Long Wang

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   | WBR1 Antenna   |
| Product model  | WBR1   |
| Antenna Type   | PCB Antenna  |
| Test Items     | Gain; Efficiency; Radiation Pattern  |
| Test Frequency | 2400-2500MHz   |
| Test Standard  | ANSI/IEEE Std 149-1979   |

## 2. Test Configurations

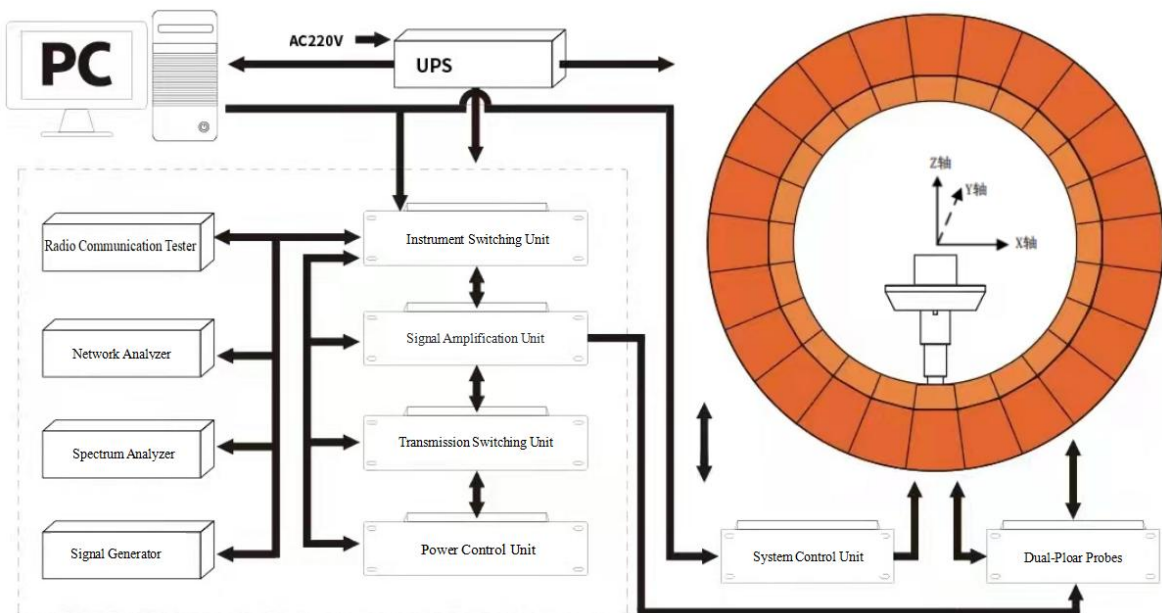
### 2.1 Test Environment

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





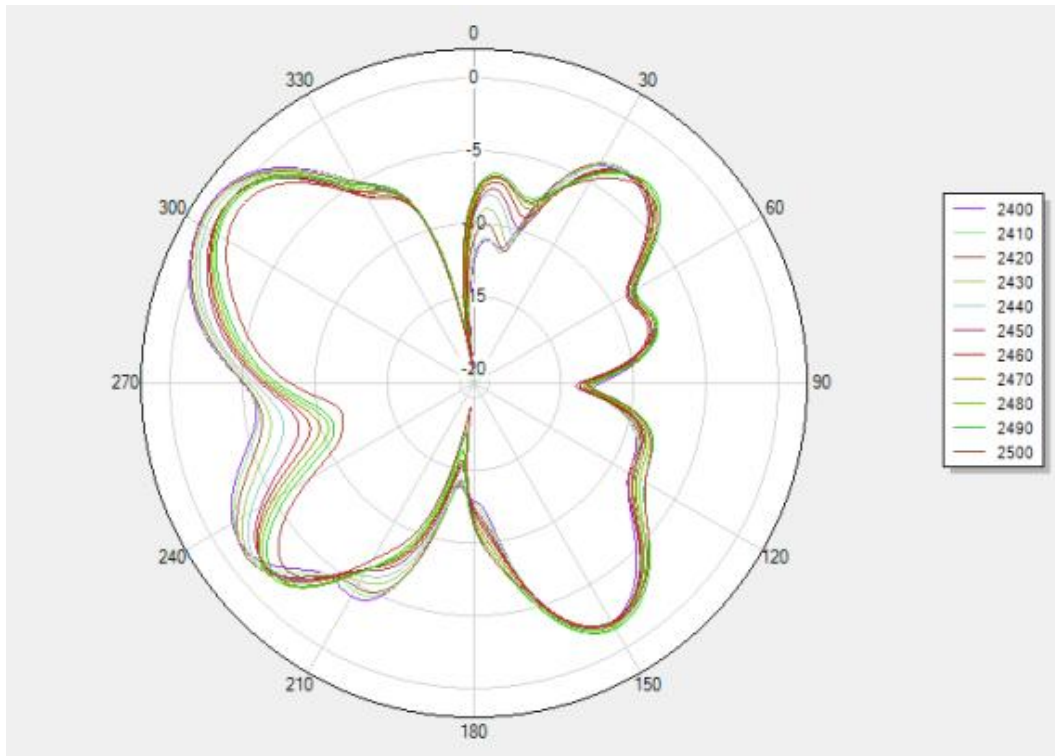
## 3.Test Results

### 3.1 Gain and Efficiency

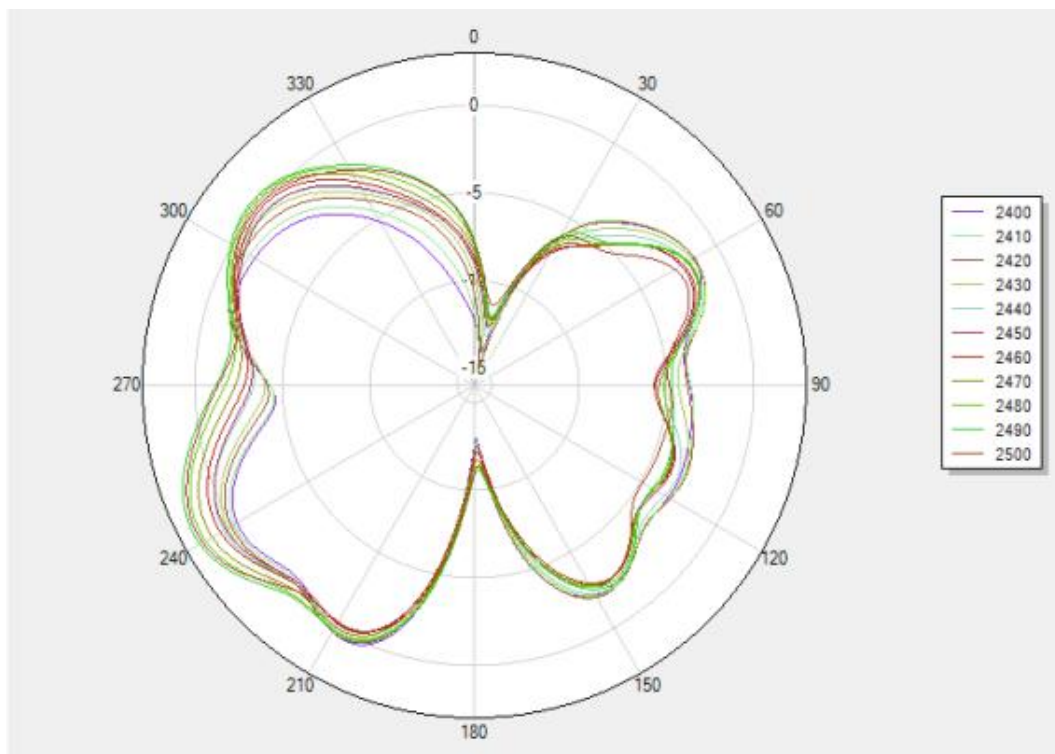
| Frequency (MHz) | Peak Gain (dBi) | Efficiency (%) |
|-----------------|-----------------|----------------|
| 2400            | 1.62            | 52.29          |
| 2410            | 1.71            | 52.17          |
| 2420            | 1.93            | 53.14          |
| 2430            | 1.98            | 54.16          |
| 2440            | 2.00            | 57.62          |
| 2450            | 2.17            | 59.64          |
| 2460            | 2.45            | 61.55          |
| 2470            | 2.38            | 60.64          |
| 2480            | 2.54            | 62.86          |
| 2490            | 2.30            | 59.85          |
| 2500            | 2.49            | 60.41          |

### 3.2 Radiation Pattern

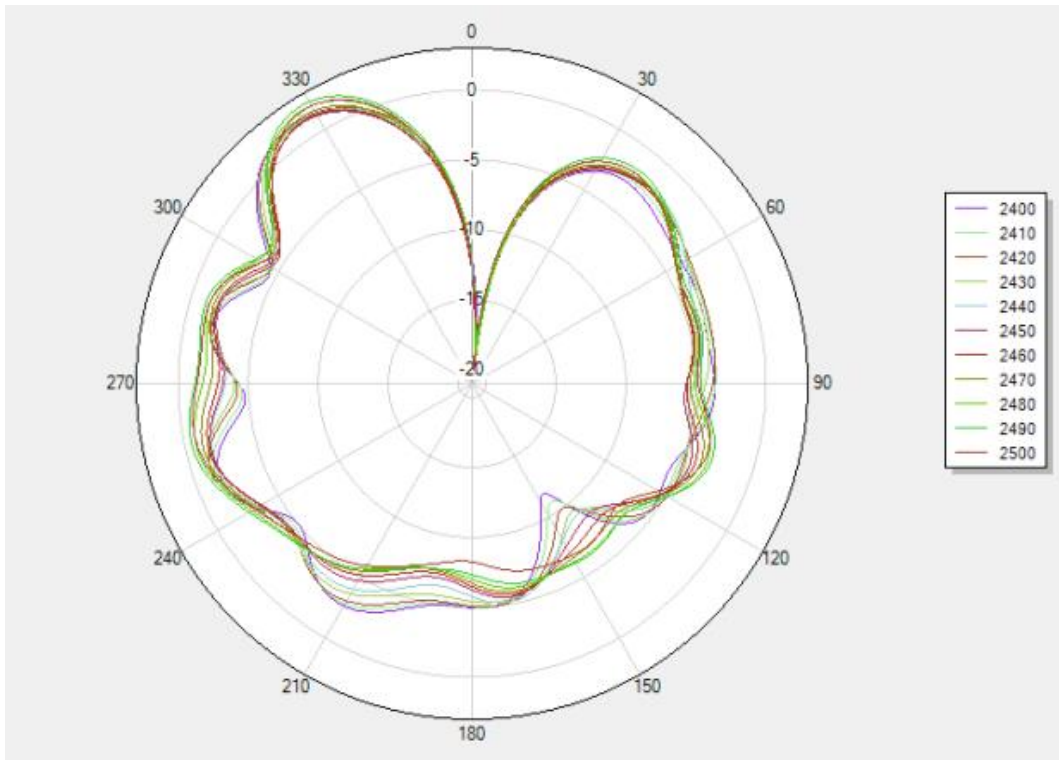
Phi 0 2D



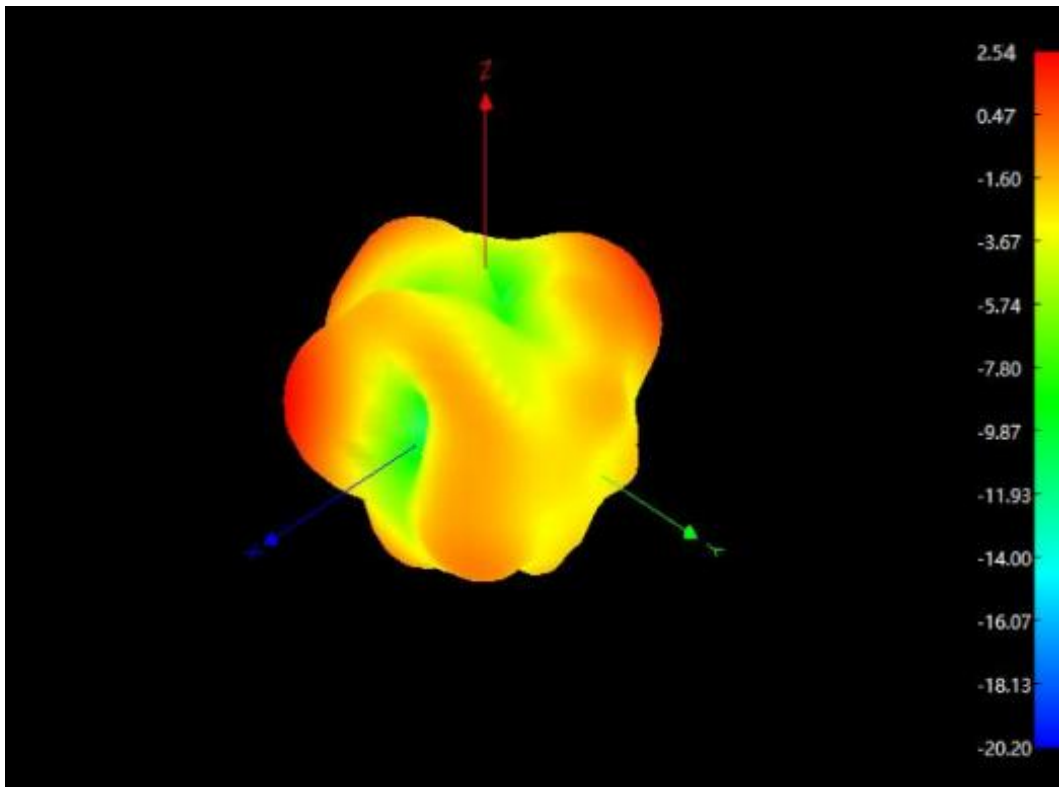
Phi 90 2D



Theta 90 2D

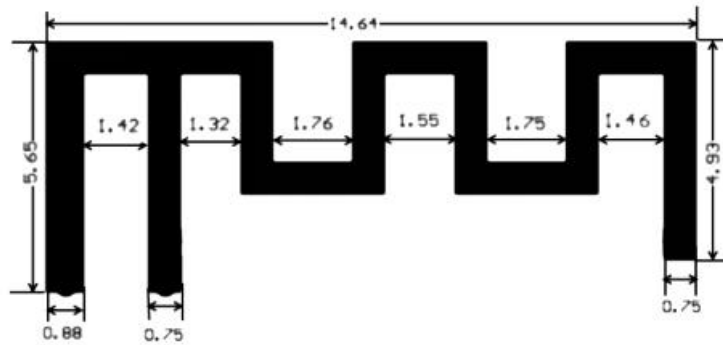


2480MHz 3D

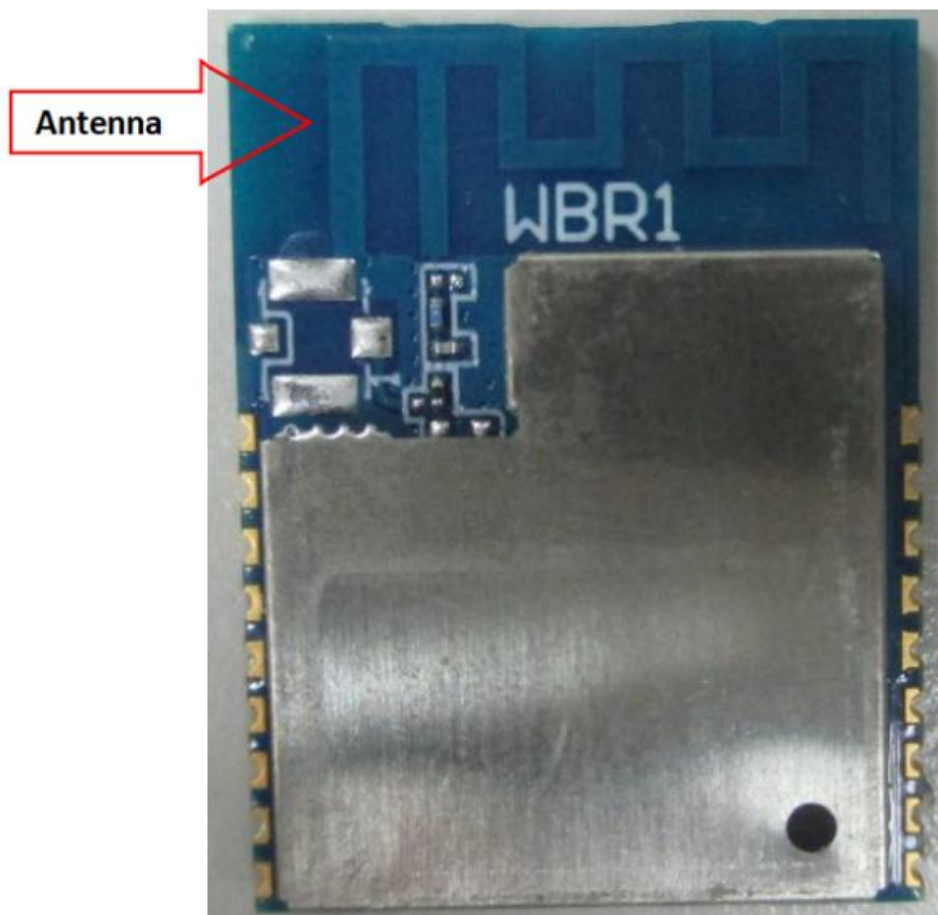


## 4. Antenna Dimensions

Unit: mm



## 5. EUT Photo





## 6.Test Setup Photo

