



Antenna Specification

Manufacture: TUYA

Product Name: BT3L Antenna

Antenna Type: PCB

Test Date: 2021.11.26

Tested by: Yingyun Tong

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, Hangzhou, Zhejiang,China |
| Test Location | Room 106, Building 3, Letong Science Park, No. 500, Qiuyi Road, Binjiang District, Hangzhou |
| Product Name | BT3L Antenna |
| Product model | BT3L |
| Antenna Type | PCB Antenna |
| Test Items | Gain; Efficiency; Radiation Pattern |
| Test Frequency | 2400-2500MHz |
| Test Standard | ANSI/IEEE Std 149-1979 |

2. Test Configurations

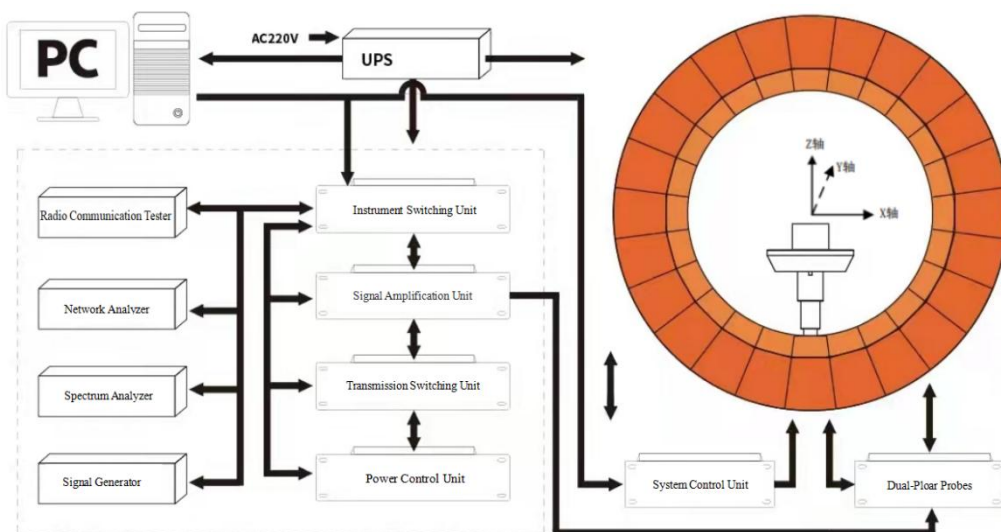
2.1 Test Environment

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

2.2 Test Equipment

| | |
|------------------|--|
| Test System | TEM 24 Multi-probe Microwave Chamber |
| Test Software | Passive Test  |
| Software Version | V2.7.0 |
| Test Instrument | Agilent E5071B |

2.3 Test Principle





3.Test Results

3.1 S11

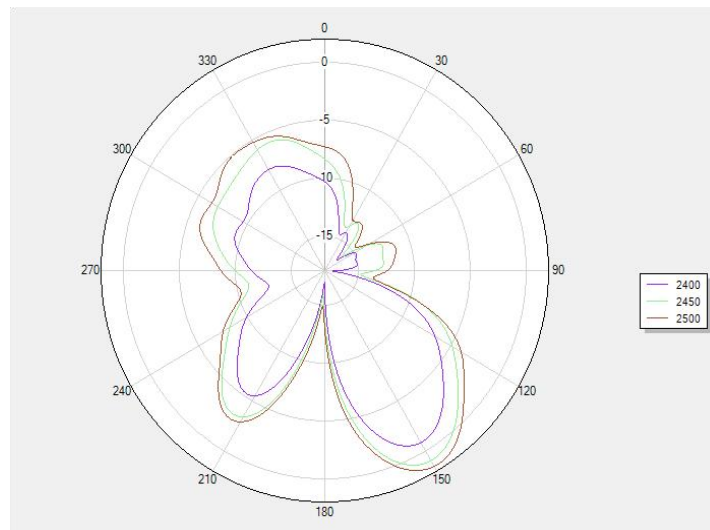
| Frequency (MHz) | 2400 | 2450 | 2500 |
|-----------------|--------|--------|--------|
| Return Loss(dB) | -12.08 | -20.32 | -15.08 |

3.2 Gain and Efficiency

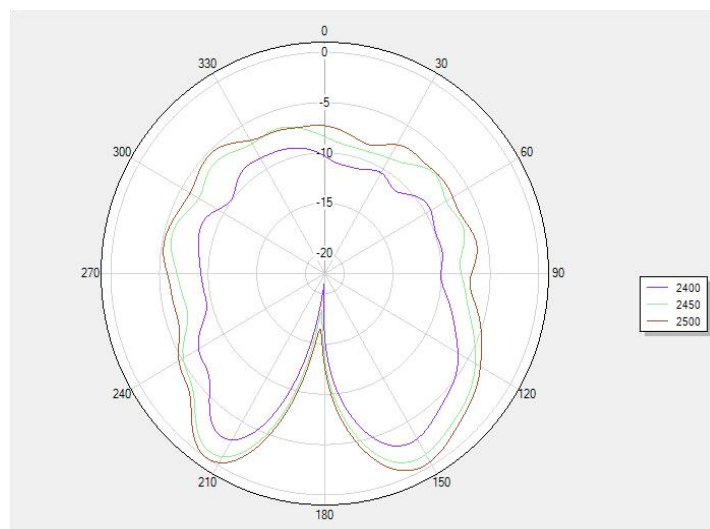
| Frequency (MHz) | Peak Gain (dBi) | Efficiency (%) |
|-----------------|-----------------|----------------|
| 2400 | -0.09 | 16.87 |
| 2410 | 0.21 | 17.95 |
| 2420 | 0.38 | 18.28 |
| 2430 | 0.77 | 19.91 |
| 2440 | 1.38 | 23.01 |
| 2450 | 1.74 | 24.83 |
| 2460 | 2.18 | 27.29 |
| 2470 | 2.18 | 28.44 |
| 2480 | 2.19 | 27.23 |
| 2490 | 2.18 | 27.86 |
| 2500 | 2.50 | 28.84 |

3.3 Radiation Pattern

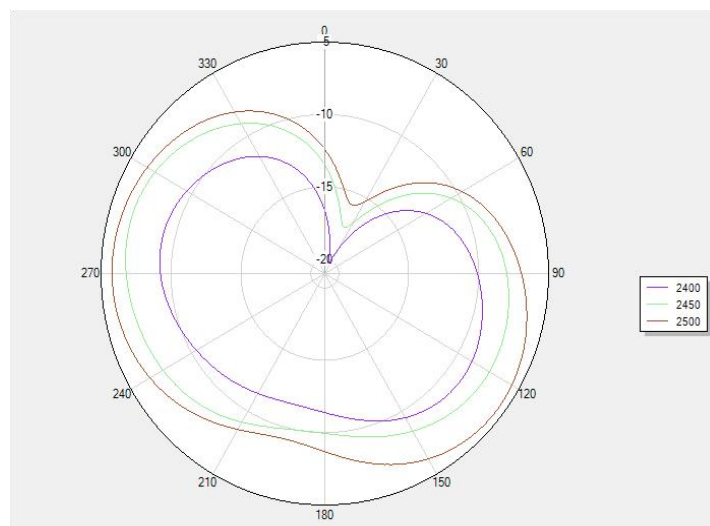
Phi 0 2D



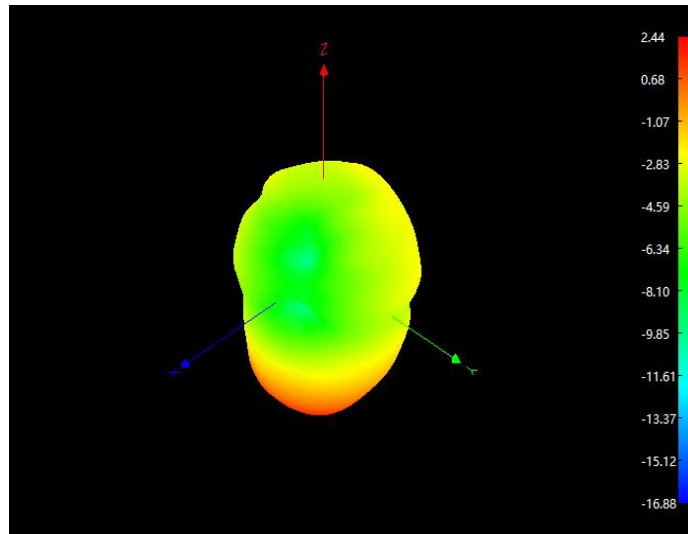
Phi 90 2D



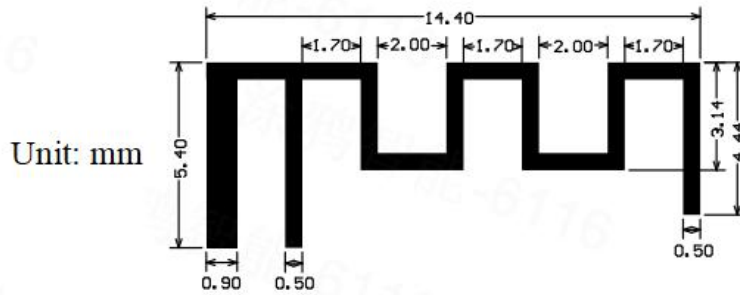
Theta 90 2D



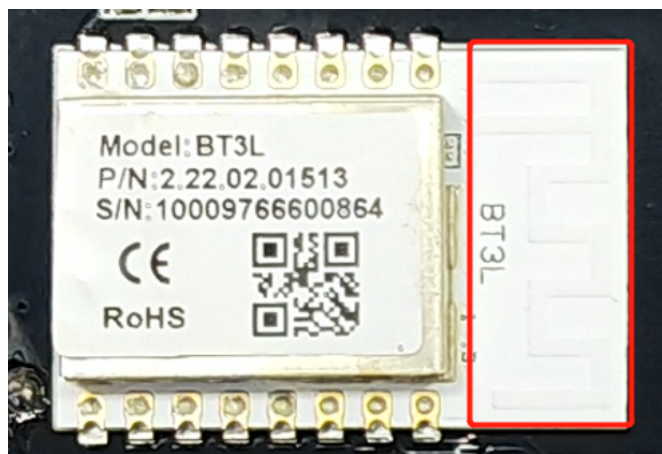
2500MHz 3D



4. Antenna Dimensions



5. EUT Photo



6.Test Setup Photo

