



Antenna Specification

Manufacture: TUYA

Product Name: TTFM-52 Antenna

Antenna Type: PCB

Test Date: 2024.8.15

Tested by: xuankong

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 509, Building 1, No. 5 Zhiren Street, Binjiang District, Hangzhou
Product Name	TTFM-52 Antenna
Product model	TTFM-52
Antenna Type	PCB Antenna
Test Items	Gain; Efficiency; Radiation Pattern
Test Frequency	2400-2500MHz
Test Standard	ANSI/IEEE Std 149-1979

2.Test Configurations

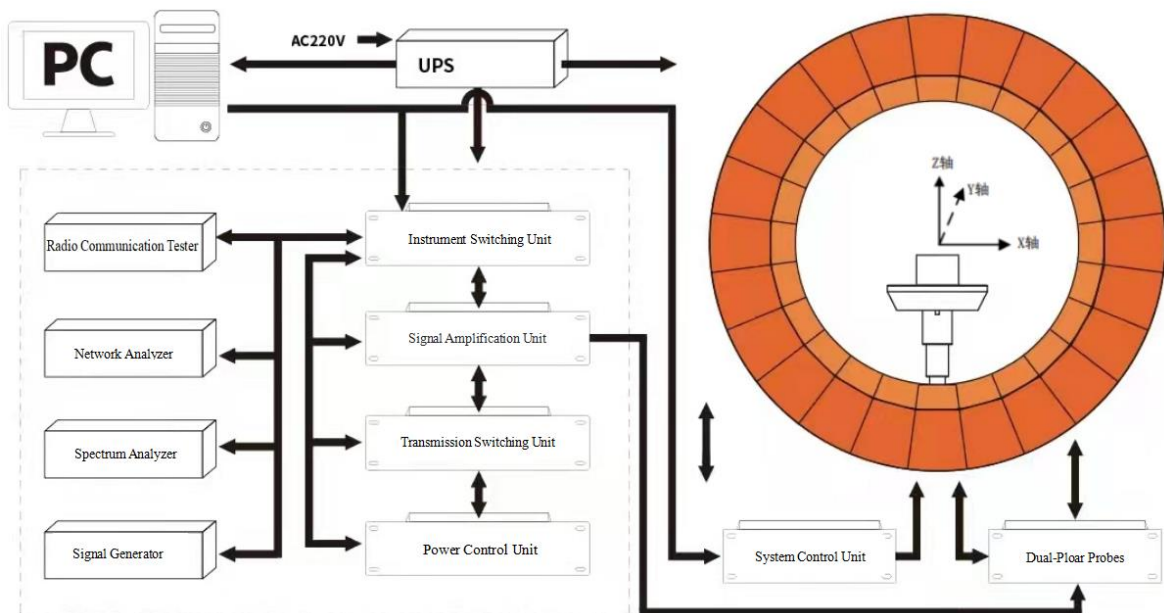
2.1 Test Environment

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





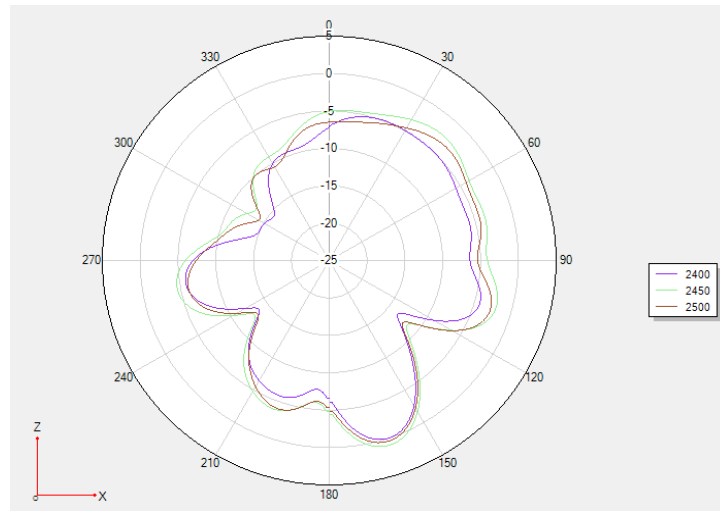
3.Test Results

3.1 Gain and Efficiency

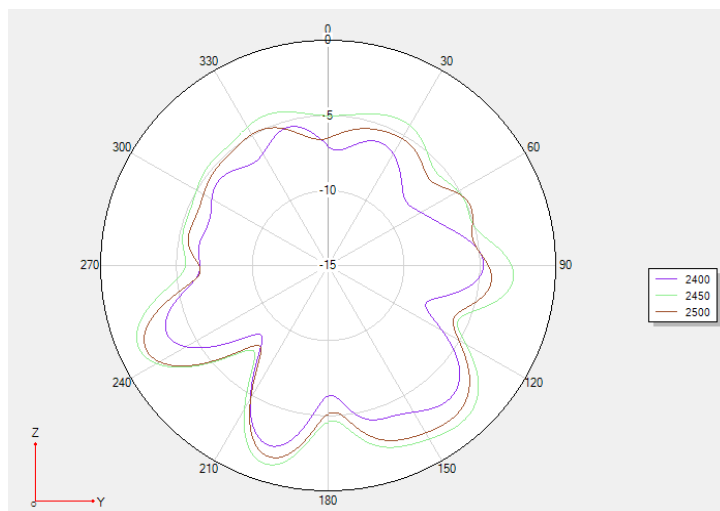
Frequency (MHz)	Peak Gain (dBi)	Efficiency (%)
2400	-5.92	25.59
2410	-5.48	28.31
2420	-5.05	31.26
2430	-4.71	33.81
2440	-4.56	34.99
2450	-4.52	35.32
2460	-4.57	34.91
2470	-4.44	35.97
2480	-4.8	33.11
2490	-5	31.62
2500	-5.29	29.58

3.2 Radiation Pattern

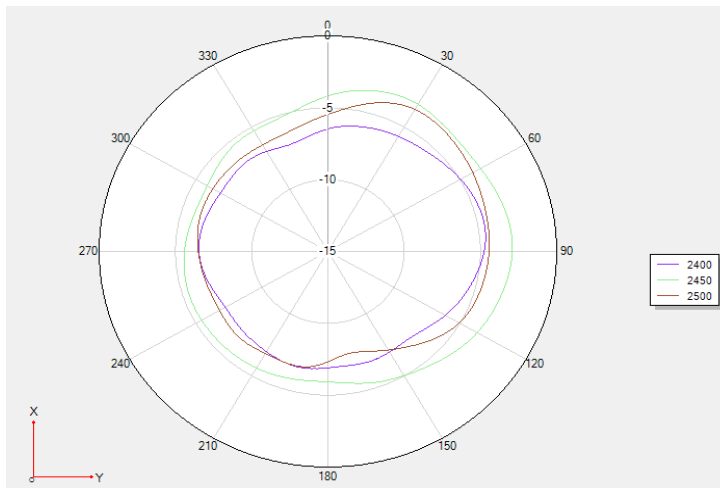
Phi 0 2D



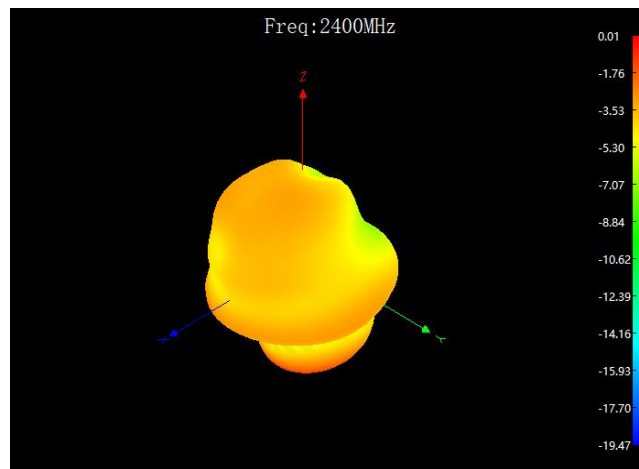
Phi 90 2D



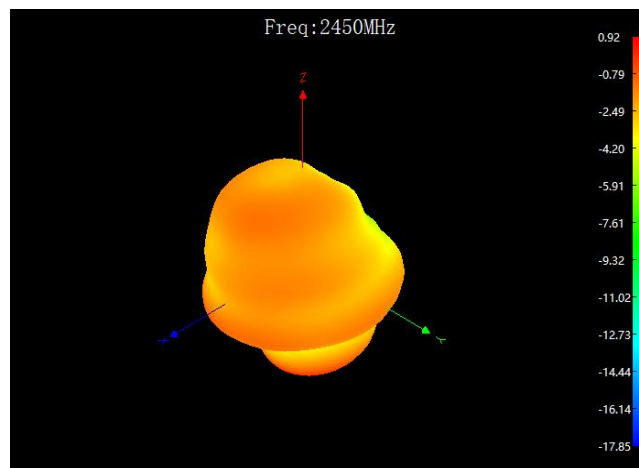
Theta 90 2D



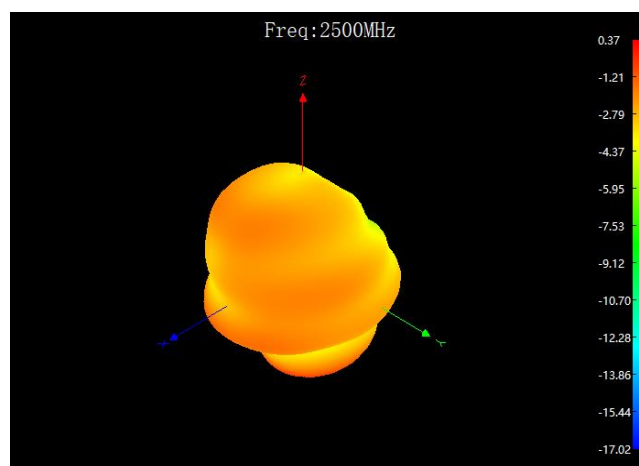
2400MHz 3D



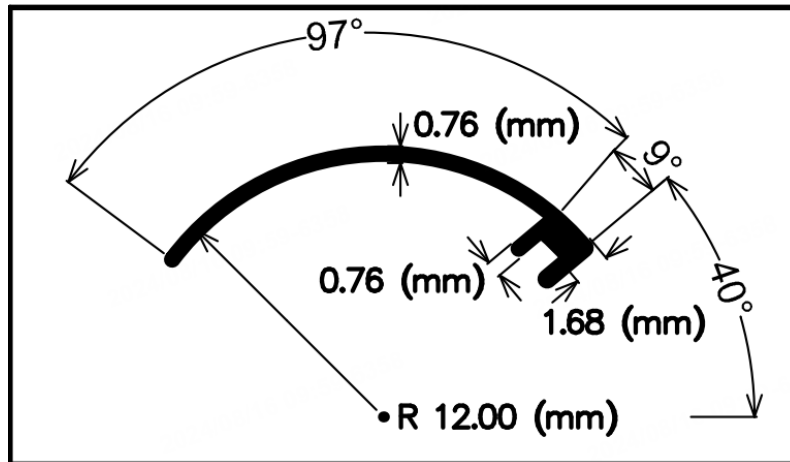
2450MHz 3D



2500MHz 3D



4. Antenna Dimensions



5. EUT Photo



6.Test Setup Photo

