



Antenna Specification

Manufacture: TUYA

Product Name: BTU Antenna

Antenna Type: PCB

Test Date: 2021.05.07

Tested by: Chen Lei

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

2. Test Configurations

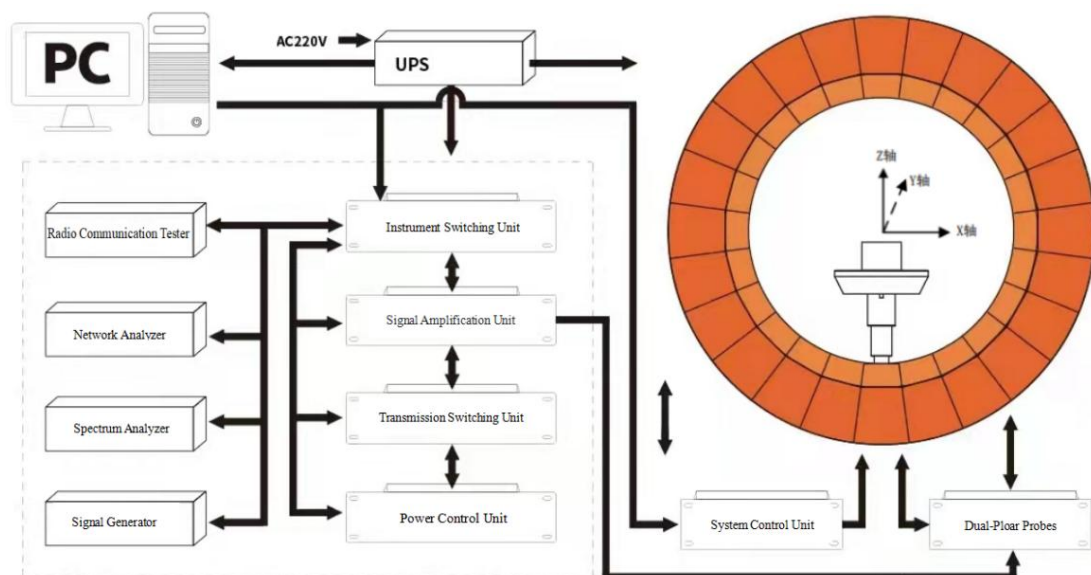
2.1 Test Environment

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

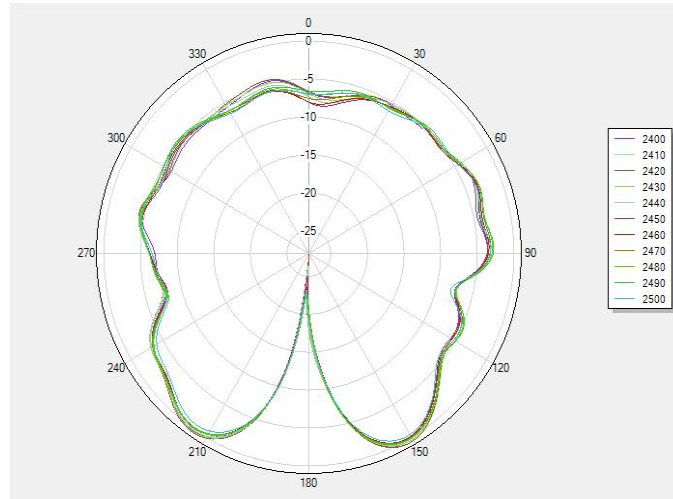
Frequency (MHz)	2400	2450	2500
Return Loss (dB)	-11.2	-13.12	-10.1
VSWR	1.8	1.6	1.9

3.2 Gain and Efficiency

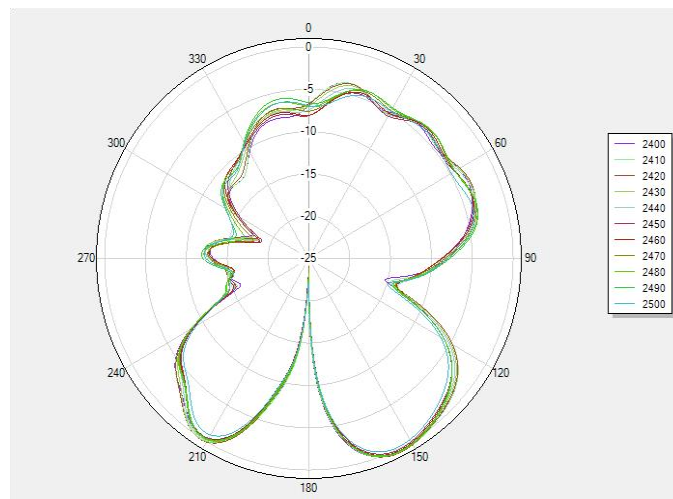
Frequency (MHz)	Peak Gain (dBi)	Efficiency (%)
2400	1.02	35.24
2410	1.08	35.73
2420	1.01	35.24
2430	0.81	34.91
2440	0.73	33.96
2450	0.54	32.14
2460	0.65	32.06
2470	0.72	32.51
2480	0.76	33.96
2490	0.67	33.19
2500	0.14	30.97

3.3 Radiation Pattern

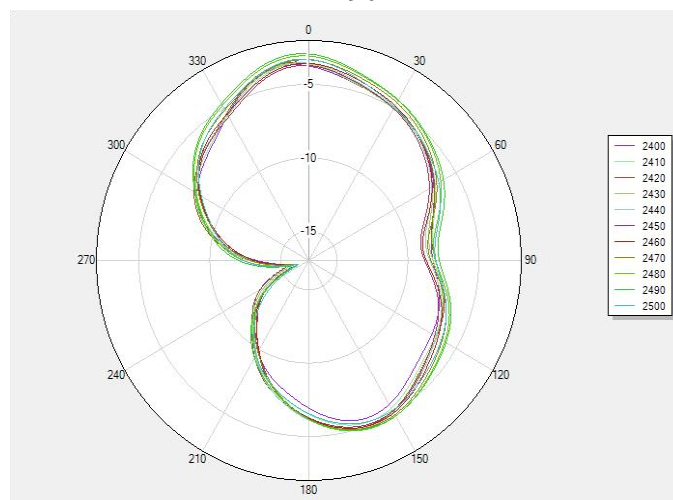
Phi 0 2D



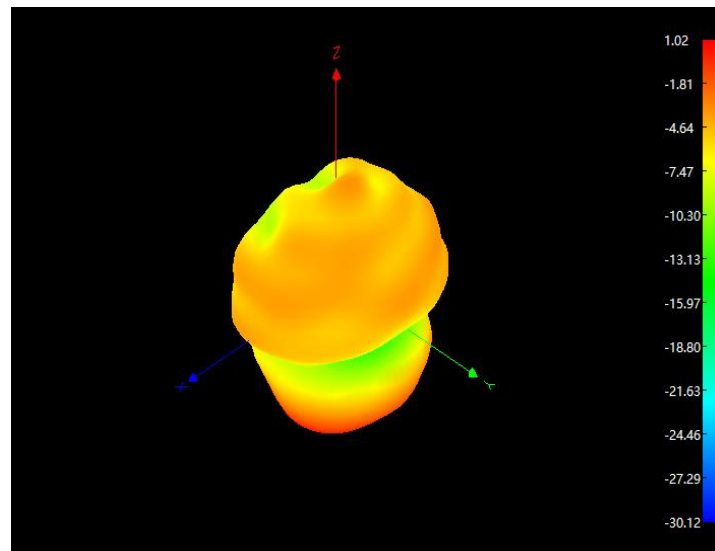
Phi 90 2D



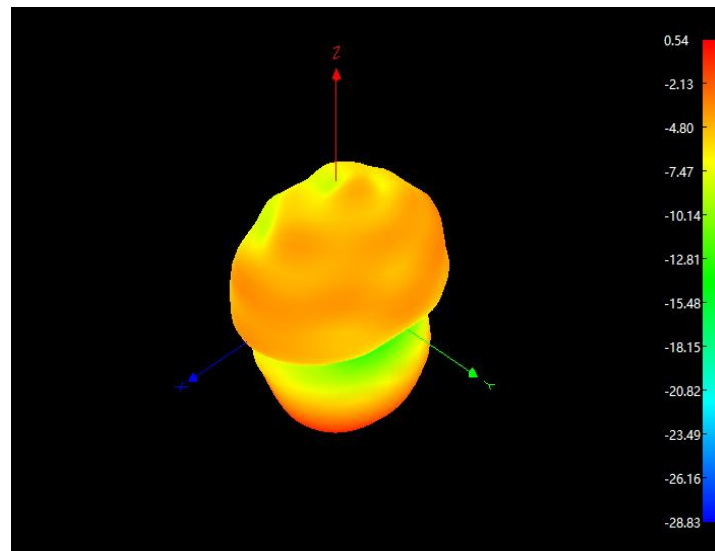
Theta 90 2D



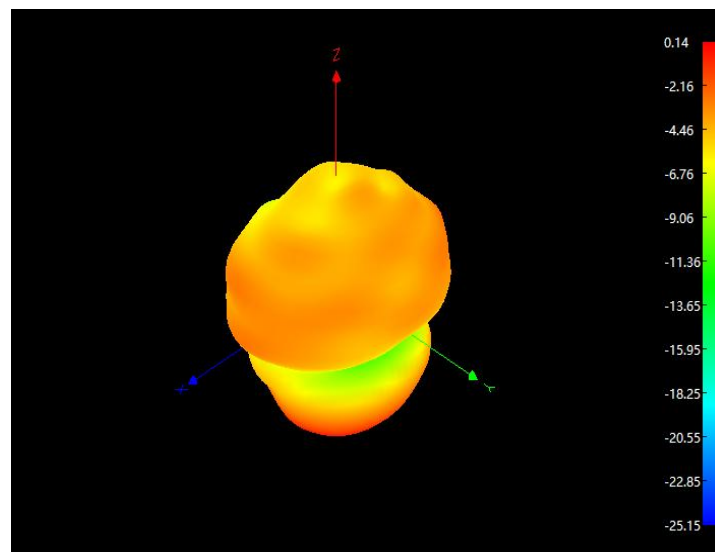
2400MHz 3D



2450MHz 3D

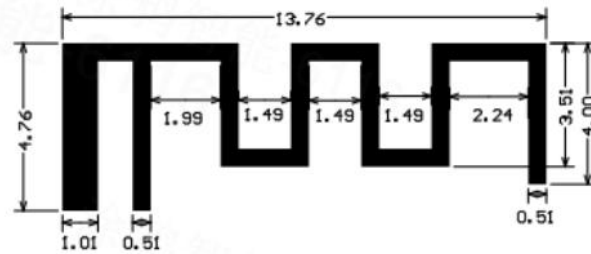


2500MHz 3D



4. Antenna Dimensions

Unit: mm



5. EUT Photo



6. Test Setup Photo

