

Antenna Specification

Manufacture: Red Fox Industrial Co., Limited

Product Name: DataLogger_IIoT

Antenna Type: PCB

Test Date: 2023.09.16

Tested by: Yi Sheng

Approved by: Yi Sheng

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1.General Description

Manufacturer	Red Fox Industrial Co., Limited
Address	Building B,Xindi Central, No.868 Guangming Avenue, Guangming Street, Guangming District, Shenzhen City Guangdong province , China
Test Location	
Product Name	DataLogger_IIoT
Product model	ESP32-WROOM-32
Antenna Type	PCB Antenna
Test Items	Gain; Efficiency; Radiation Pattern
Test Frequency	2400-2500MHz
Test Standard	ANSI/IEEE Std 149-1979

2.Test Configurations

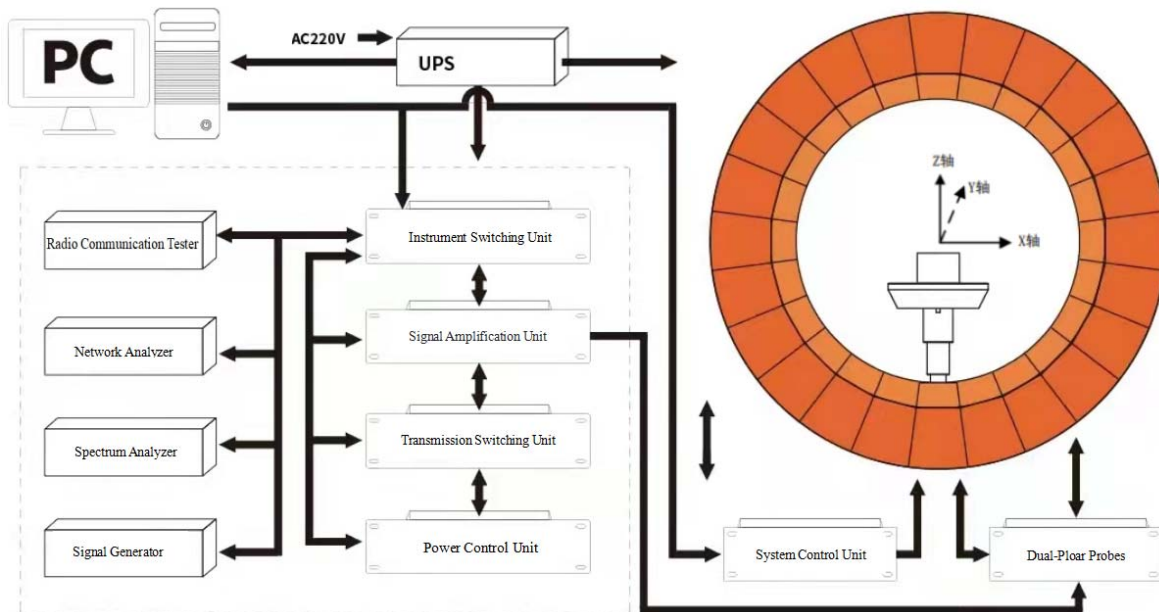
2.1 Test Environment

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



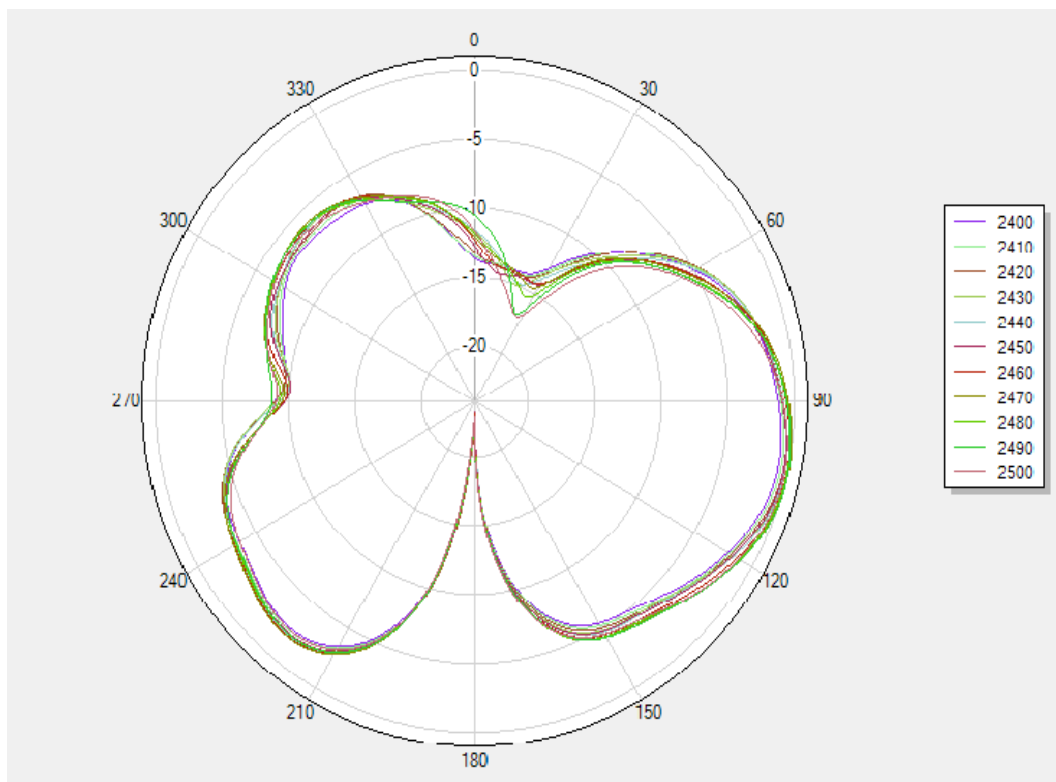
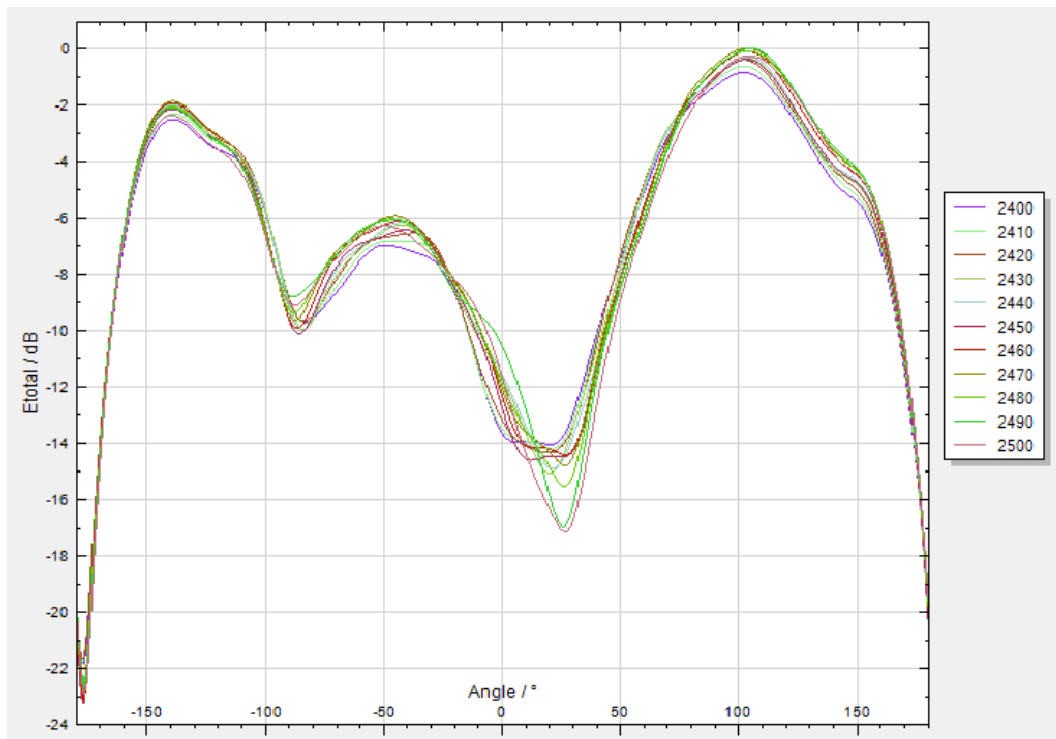
3.Test Results

3.1 Gain and Efficiency

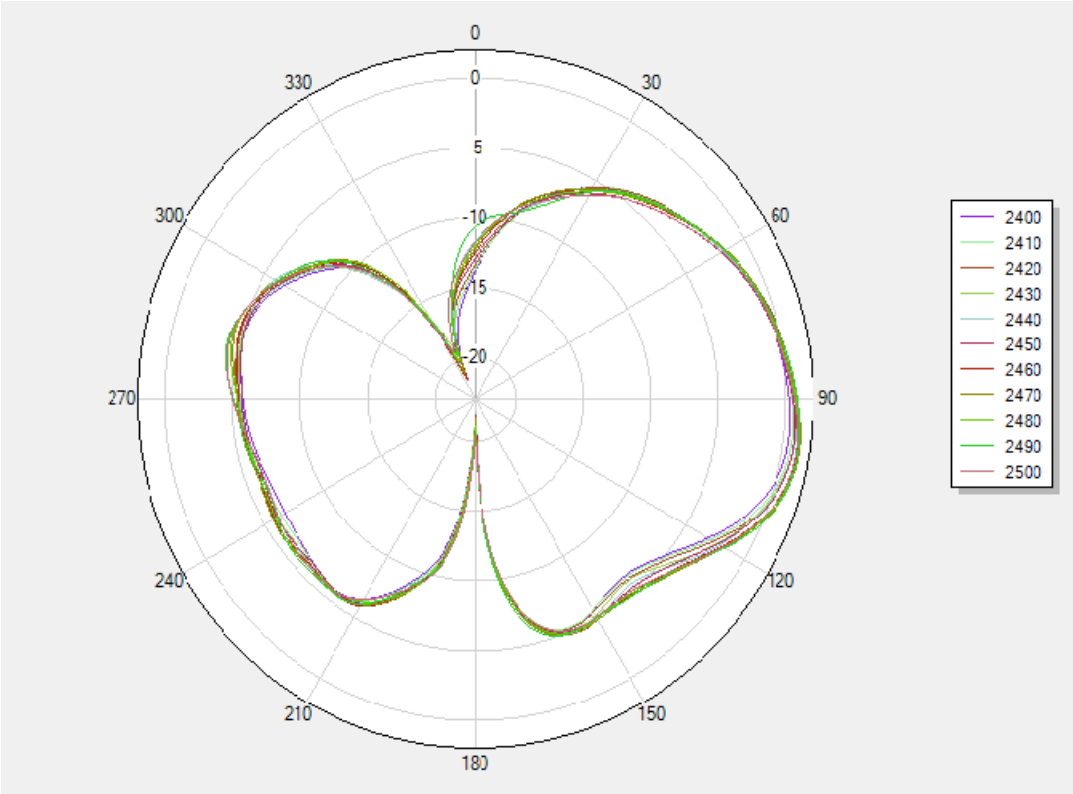
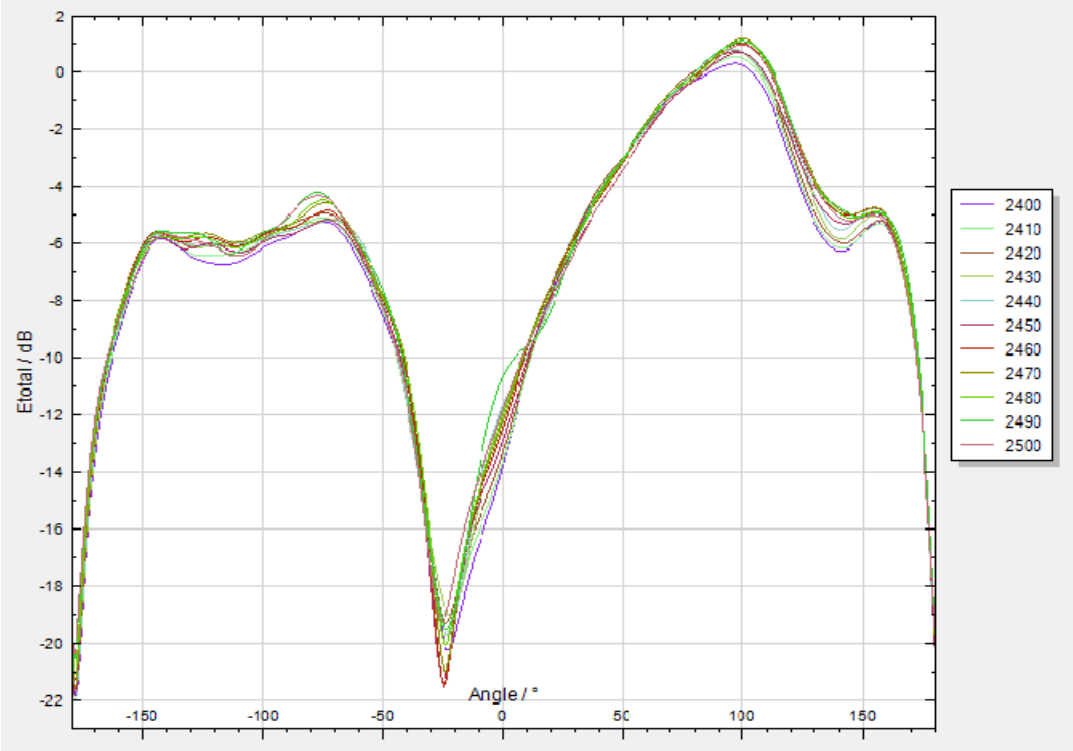
Frequency (MHz)	Peak Gain (dBi)	Efficiency (%)
2400	0.46	44.36
2410	0.71	45.71
2420	0.92	45.92
2430	0.91	45.6
2440	0.95	45.6
2450	0.93	45.29
2460	1.27	46.45
2470	1.37	46.88
2480	1.25	47.21
2490	1.24	46.67
2500	1.05	44.87

3.2 Radiation Pattern

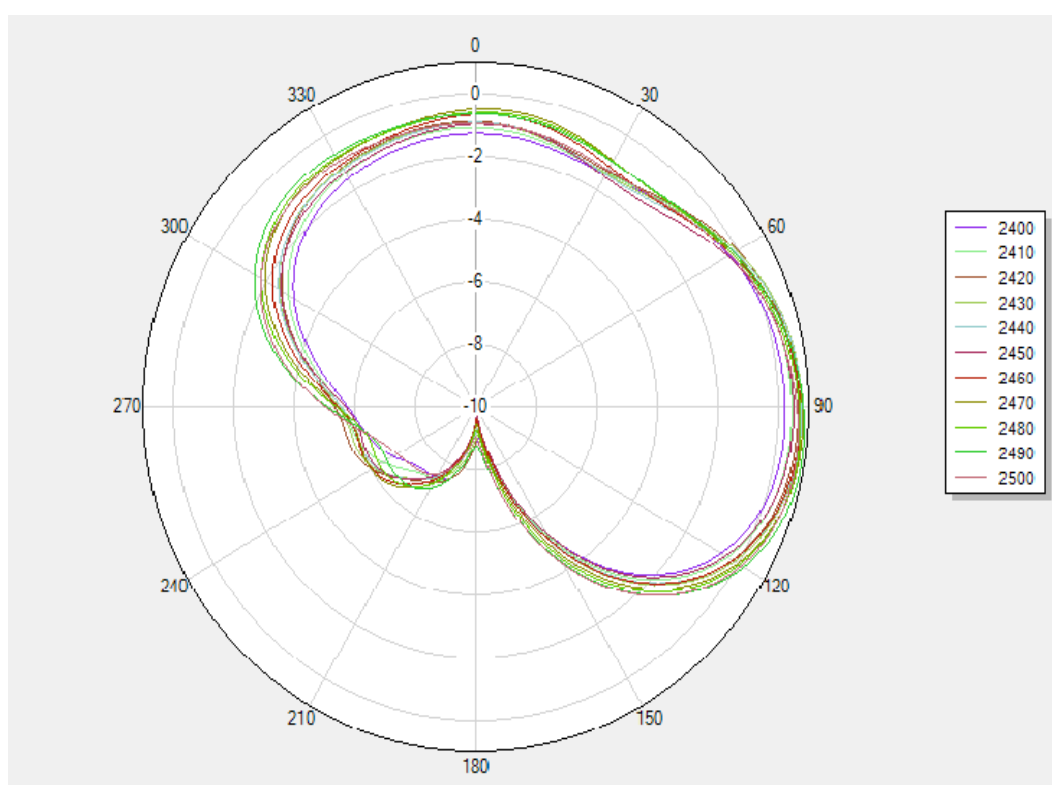
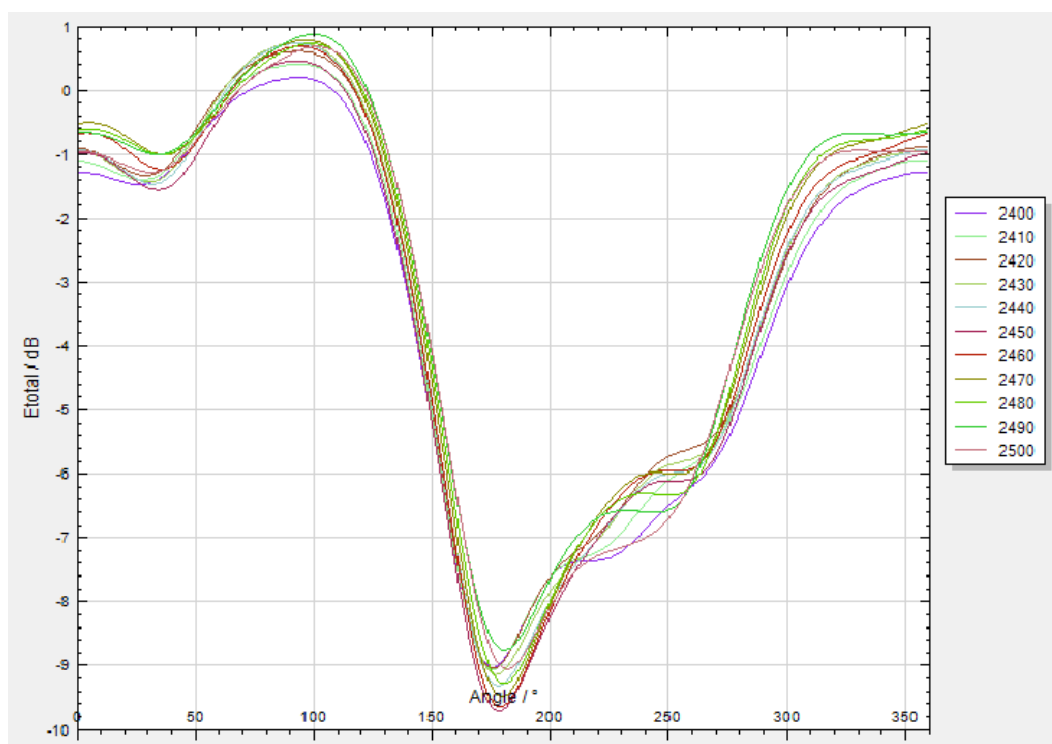
Phi 0



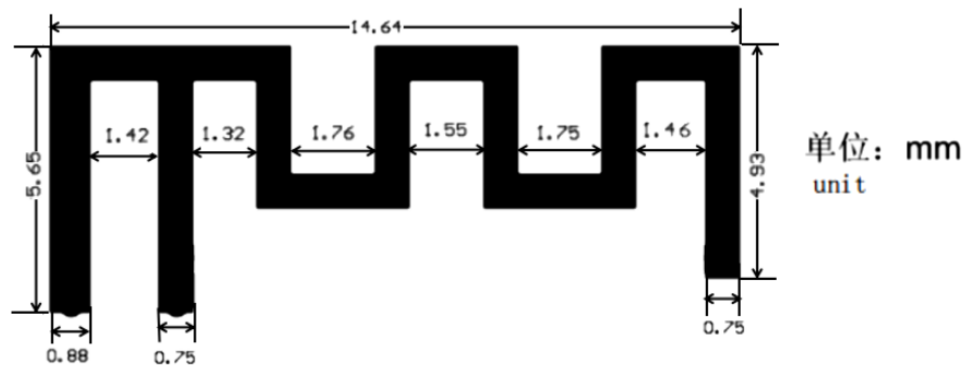
Phi 90



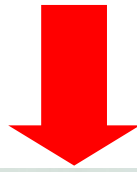
Theta 90



4. Antenna Dimensions



5.EUT Photo



6.Test Setup Photo

