

# 承 认 书

## APPROVAL SHEET

客户名称

CUSTOMER NAME:

产品名称

PRODUCT NAME: 2.4/5.8G WIFI-1 钢片内置天线

客户料号

CUSTOMER P/N:

优比电子料号

Youbi P/N: UB01NJ1D1408A REV: A

	MANUFACTURER SIGNATURE	CUSTOMER SIGNATURE
CHECKED BY:	Eddy 	
APPROVED BY:	工程专用章 Changxing.Liu	
DATE:	2023/10/11	

**Modification History**

Version	Content Revision	Issued by	Date
A	Original version	Eddy	2023-10-11

## *Content*

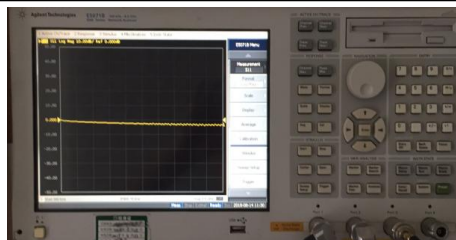
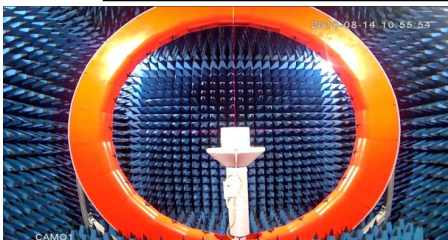
<i>Item</i>	<i>Description</i>
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3.-----	S Parameter
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## 1. Electrical Specification

Characteristics	Specifications	Unit
Outline Dimensions	18.7x18.3x6.4,T0.4	mm
Frequency	2400-2500 / 5150-5850	MHz
Impedance	50	$\Omega$
VSWR	$\leq 2$	
Polarization	Linear Polarization	
Gain	2.54 (Max)	dBi
Efficiency	> 40	%
Connector Type	DIP	
Operating temperature	-20°C~+85°C	
Storage Temp	-20°C~+50°C	

## 2. Test Items and Equipment

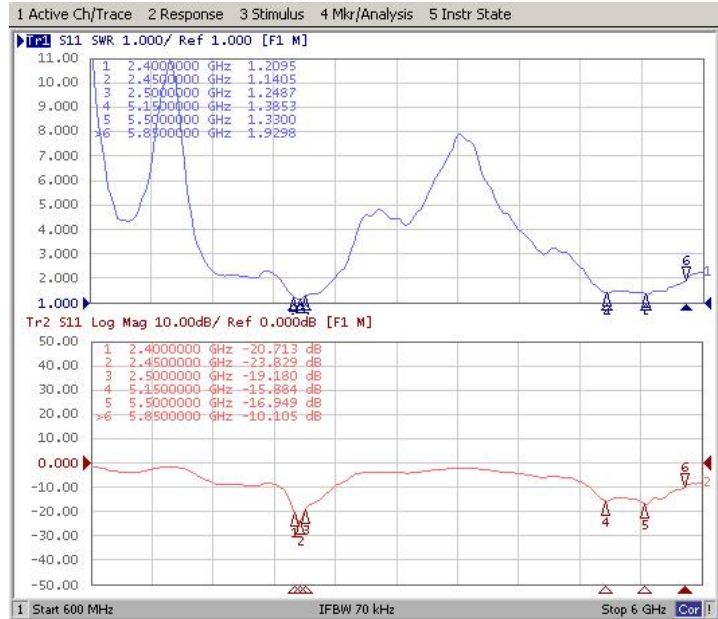
	Test items	Test equipment
S Parameter	1.Return Loss 2.VSWR	Network analyzer (Agilent E5071B)
The whole machine of Passive parameters	1.Frequency 2.Gain 3.Radiation Pattern	1.3D microwave darkroom (5m*5m*5m) 2.Network analyzer (Agilent E5071B)
The whole machine of Active parameters	1.TRP 2.TIS	1.3D microwave darkroom (5m*5m*5m) 2.Comprehensive test instrument (CMW500)



### 3. S Parameter

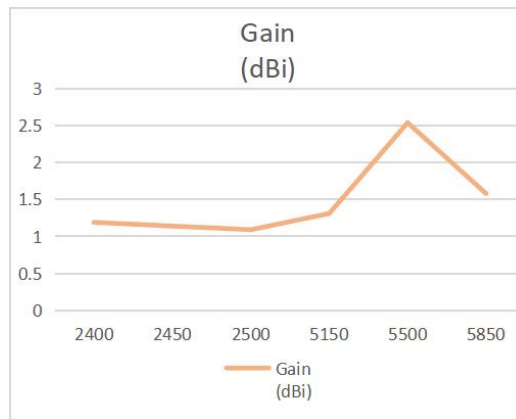
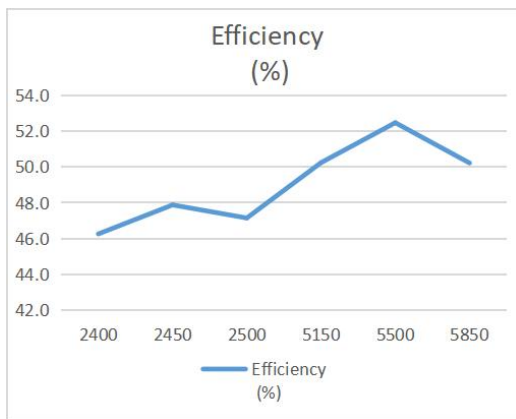
Frequency (MHz)	Return Loss (dB)	VSWR
2400	-20.71	1.20
2450	-23.82	1.14
2500	-19.18	1.24
5150	-15.88	1.38
5500	-16.94	1.33
5850	-10.10	1.92

\* Voltage Standing Wave Ratio(VSWR)  
Return Loss(RL)  
 $RL=20*\log_{10}[(VSWR+1)/(VSWR-1)]$



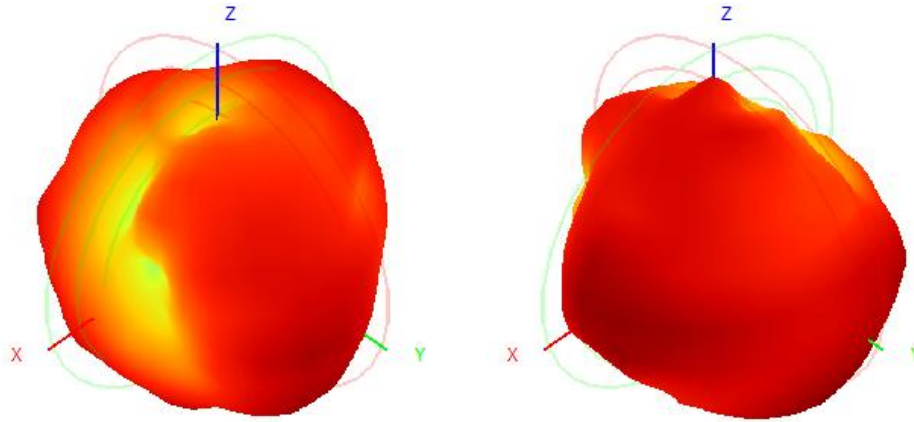
### 4. Efficiency and Gain

Frequency (MHz)	2400	2450	2500	5150	5500	5850
Efficiency (%)	46.25	47.87	47.14	50.23	52.46	50.21
Gain (dBi)	1.19	1.14	1.09	1.31	2.54	1.58



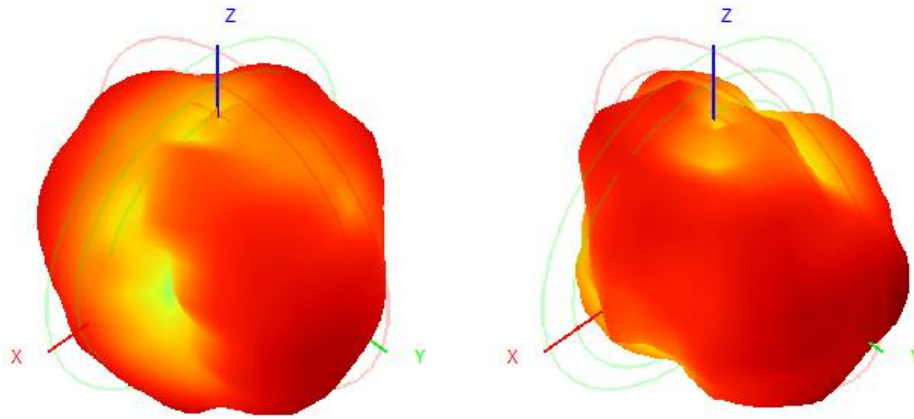
## 5. Radiation Pattern

5-1 Antenna 3D Radiation Pattern



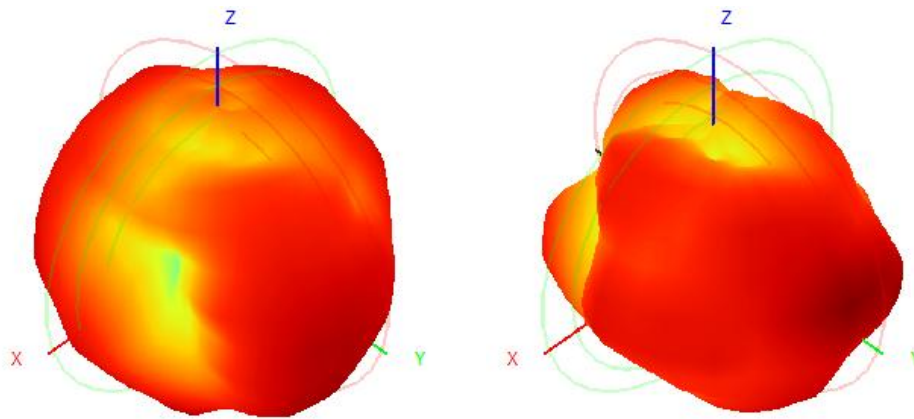
2400MHz

5150MHz



2450MHz

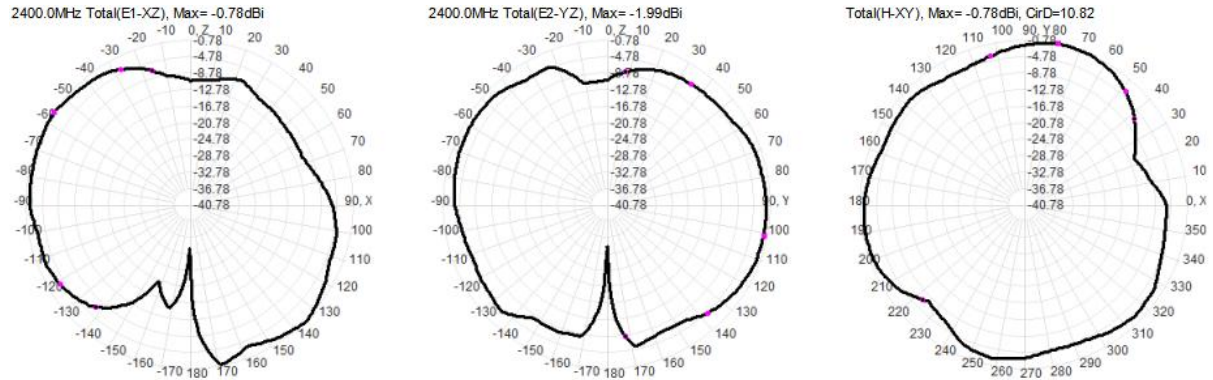
5500MHz



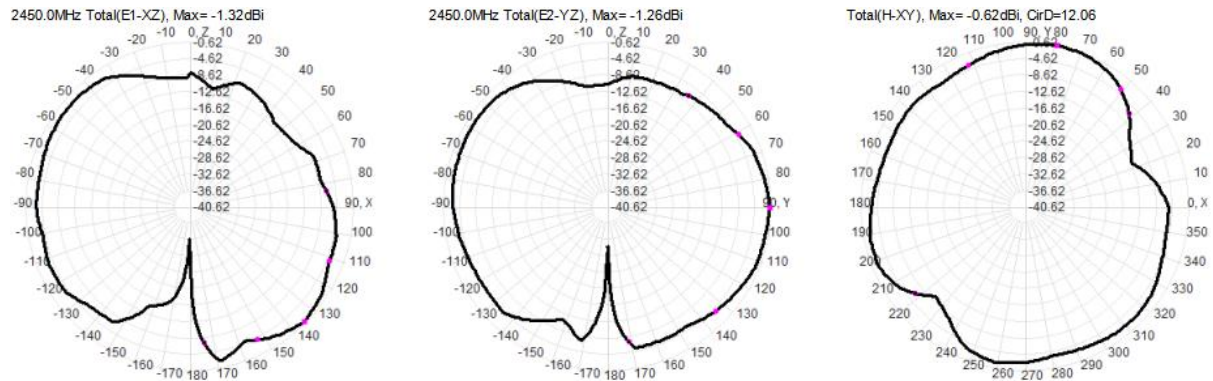
2500MHz

5850MHz

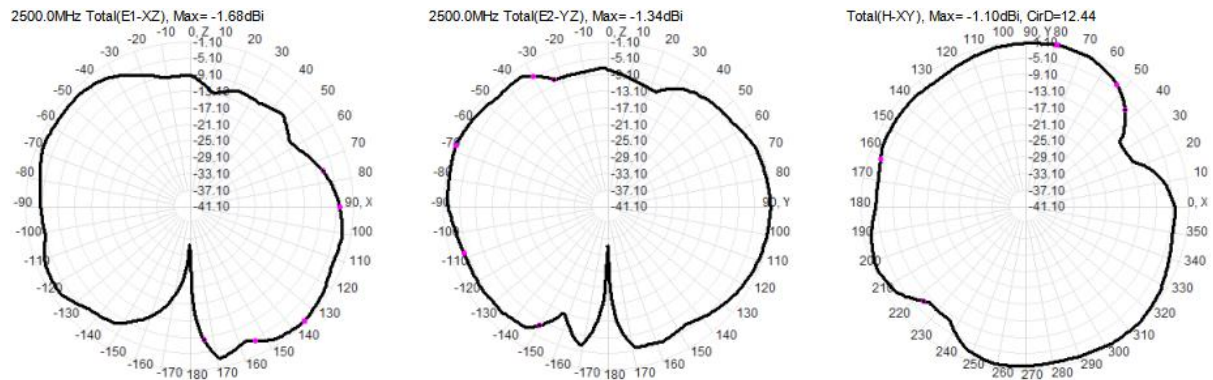
## 5-2 Antenna 2D Radiation Pattern



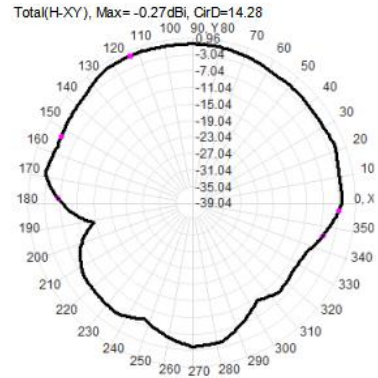
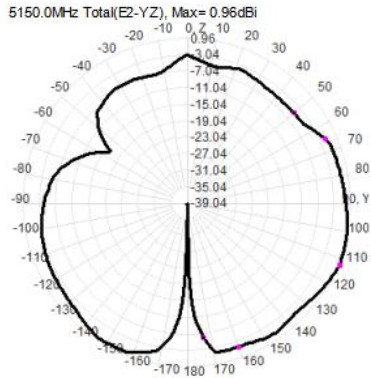
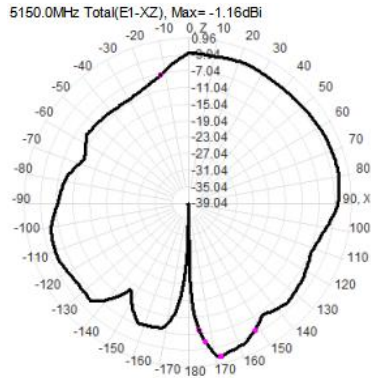
2400MHz



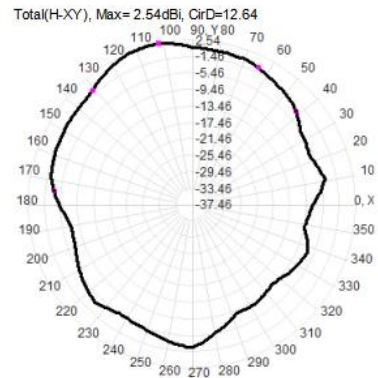
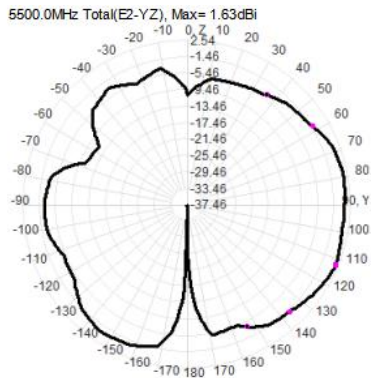
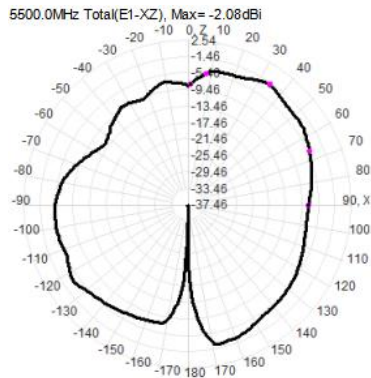
2450MHz



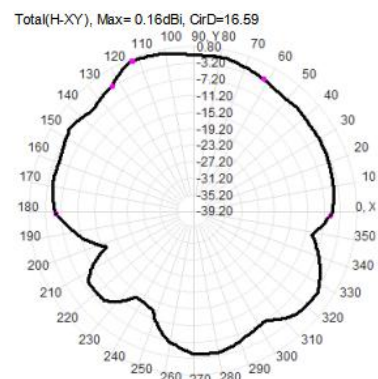
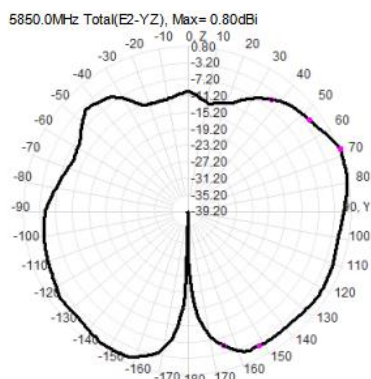
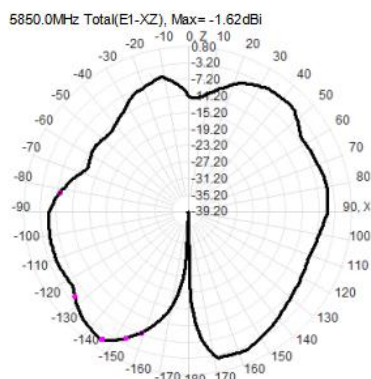
2500MHz



5150MHz



5500MHz



5850MHz



6. Active test data

802.11b:11MBps		
channel	Measurement	Total
1	TRP	18.08
6	TRP	17.34
11	TRP	18.2
1	TIS(EIRP)	-80.09
6	TIS(EIRP)	-78.7
11	TIS(EIRP)	-78.94

802.11a:54MBps		
channel	Measurement	Total
36	TRP	15.44
149	TRP	20.11
165	TRP	20.23
36	TIS(EIRP)	-75.32
149	TIS(EIRP)	-75.02
165	TIS(EIRP)	-71.31

## 7. Mechanical Specification

