

# 承 认 书

## APPROVAL SHEET

客户名称

CUSTOMER NAME:

产品名称

PRODUCT NAME: 2.4G W86 黑色天线 L=120mm+端子

客户料号

CUSTOMER P/N:

优比电子料号

Youbi P/N: UB02C120B2D23a0A REV: A

	MANUFACTURER SIGNATURE	CUSTOMER SIGNATURE
CHECKED BY:	Yongqin Lu 	
APPROVED BY:	Changxing Liu	
DATE:	2021/09/23	

**Modification History**

Version	Content Revision	Issued by	Date
A	Original version	Yongxin. Lu	2021-09-23

## *Content*

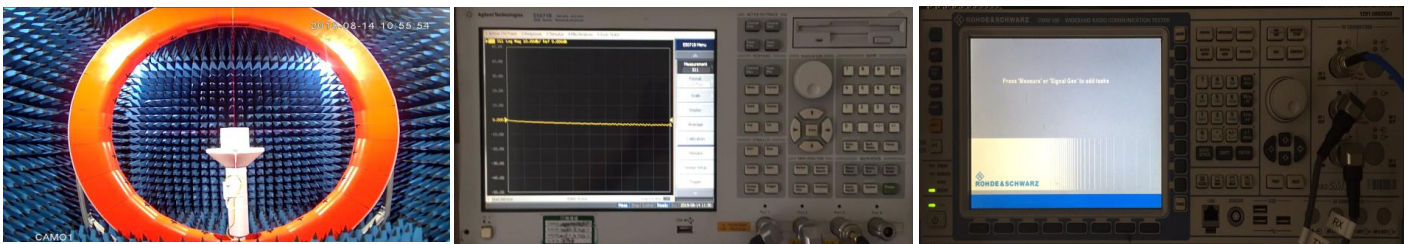
<i>Item</i>	<i>Description</i>
1.-----	Electrical Specification
2.-----	Test Items and Equipment
3.-----	S Parameter
4.-----	Efficiency and Gain
5.-----	Radiation Pattern
6.-----	Mechanical Specification
7.-----	Packaging

### 1. Electrical Specification:

Characteristics	Specifications	Unit
Outline Dimensions	12x64.2,L120	mm
Frequency	2400-2500	MHz
Impedance	50	Ω
VSWR	≤ 1.92	
Polarization	Linear Polarization	
Gain	2.0±0.5	dBi
Efficiency	>60	%
Connector Type	MHF-1-Plug	
Operating temperature	-20℃~+65℃	
Storage Temp	-20℃~+50℃	

### 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)



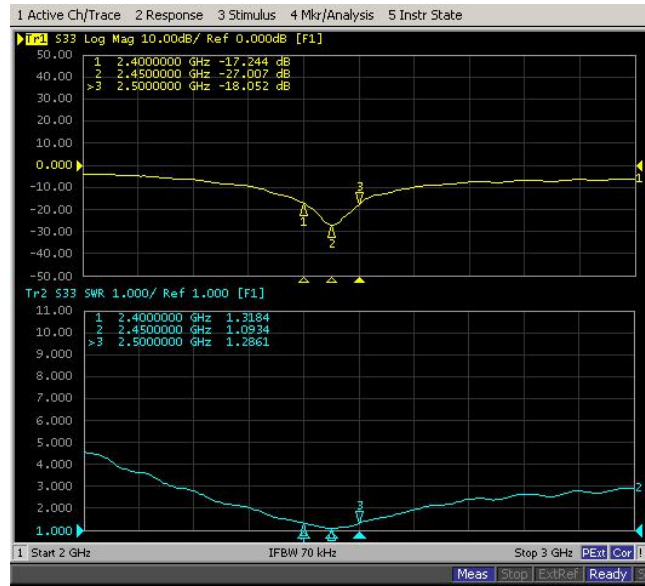
### 3. S Parameter

Frequency (MHz)	Return Loss (dB)	VSWR
2400	-17.24	1.31
2450	-27.00	1.09
2500	-18.05	1.28

\* Voltage Standing Wave Ratio(VSWR)

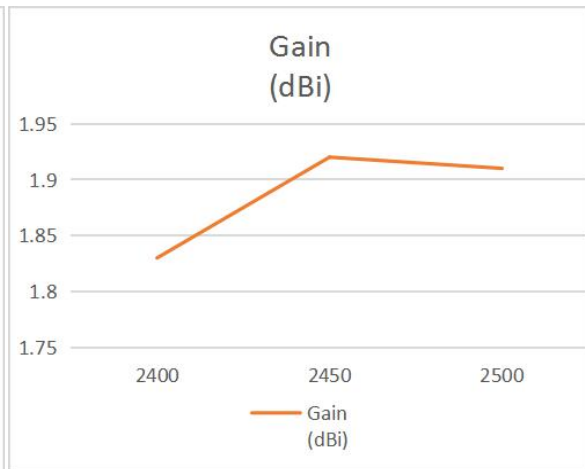
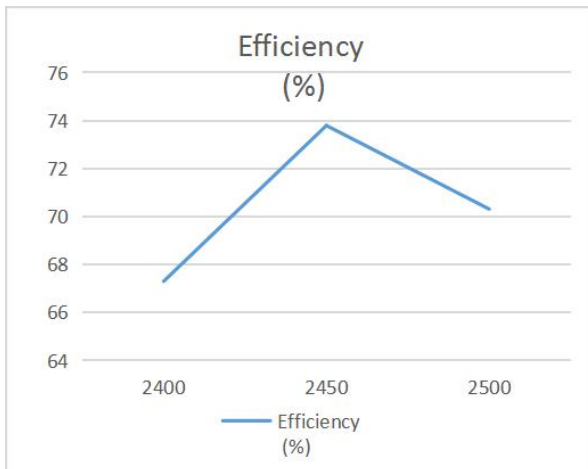
Return Loss(RL)

$$RL=20*\log_{10}[(VSWR+1)/(VSWR-1)]$$



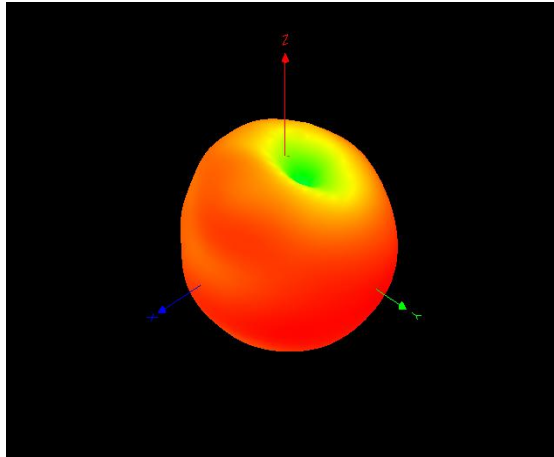
### 4. Efficiency and Gain

Frequency (MHz)	2400	2450	2500
Efficiency (%)	67.3	73.79	70.31
Gain (dBi)	1.83	1.92	1.91

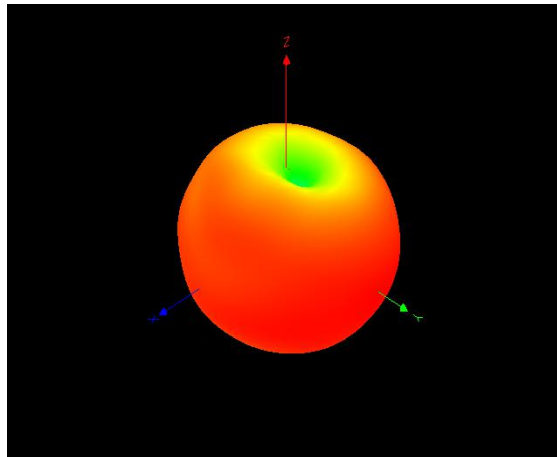


## 5. Radiation Pattern

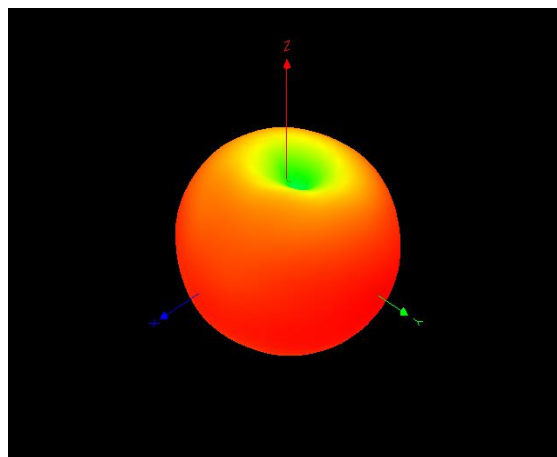
5-1 Antenna 3D Radiation Pattern



2400MHz

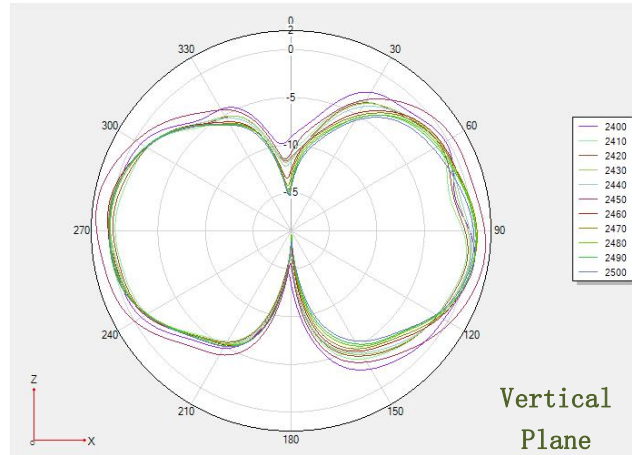


2450MHz

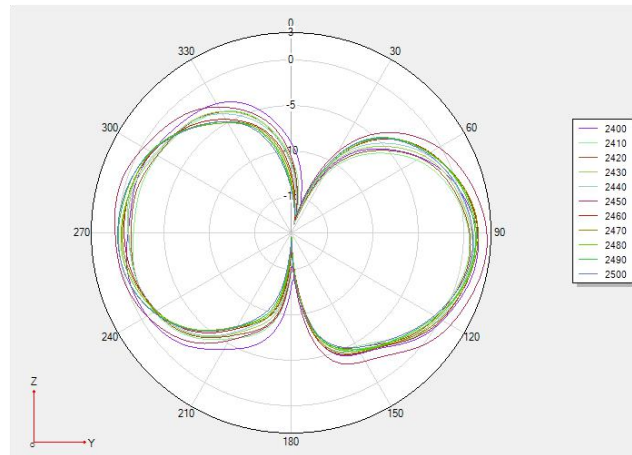


2500MHz

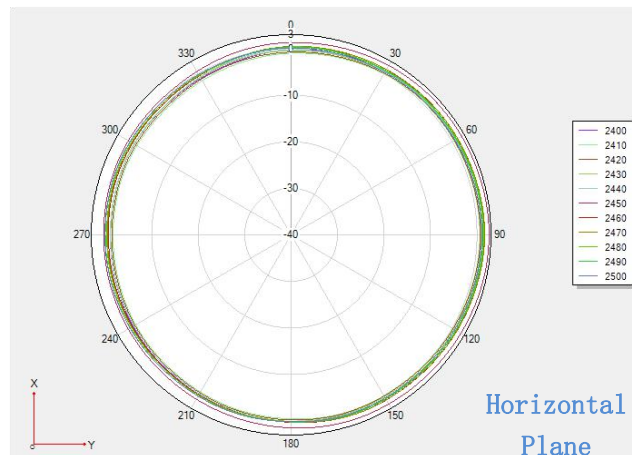
5-2 Antenna 2D Radiation Pattern



**Phi 0 2D**



**Phi 90 2D**



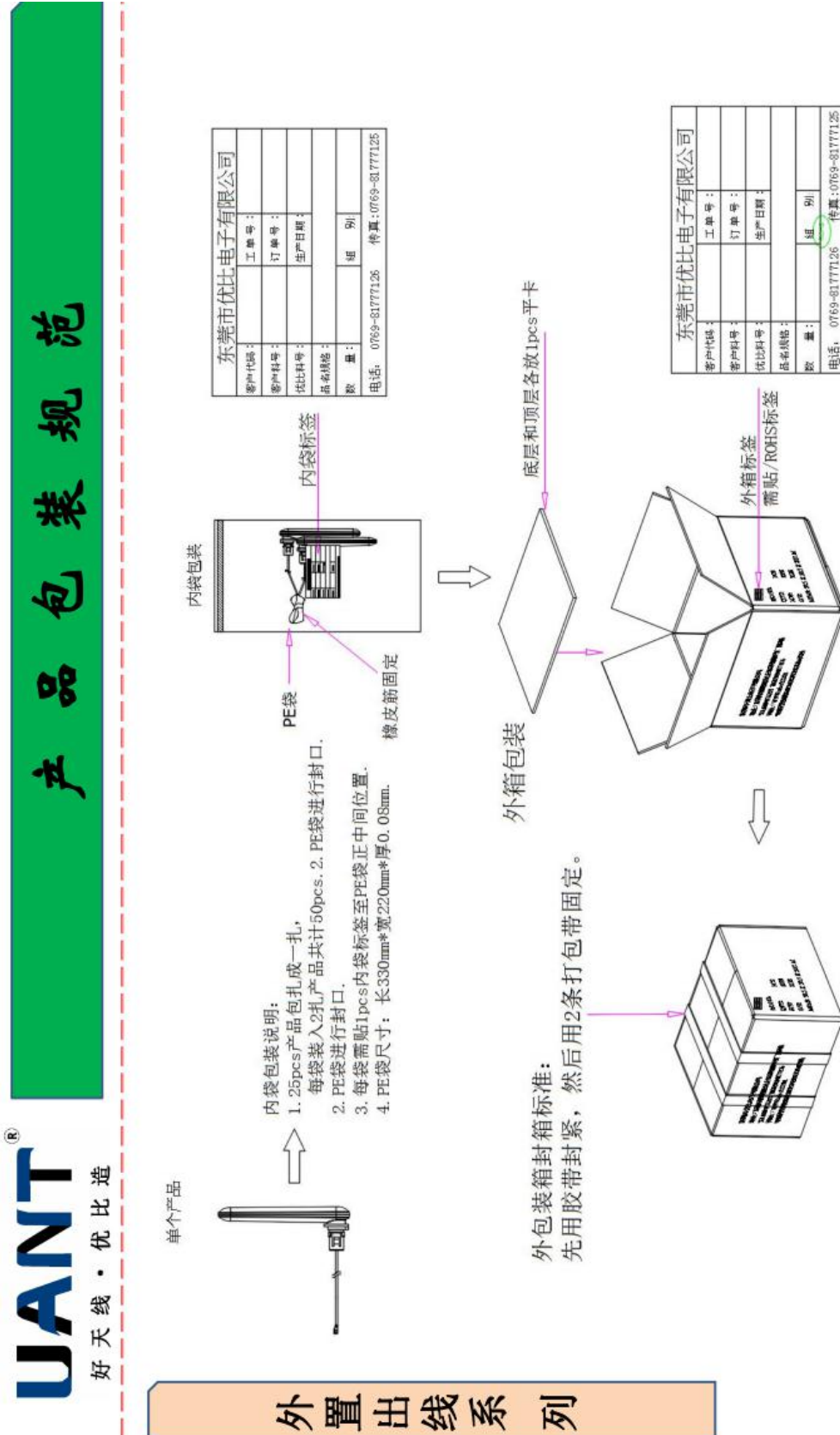
**Theta 90 2D**







### 7. Packaging:



**注:** 此份包装规范适用于外露 $\geq 100\text{mm} + \text{ipeX}$ 和外露 $\geq 100\text{mm}$ 不带ipeX产品, 属于通用类型, 包括以下产品: 产品直径 $> 11\text{mm}$

1. 3dBi四环、3dBi六环, 中号纸箱装500pcs产品每箱, 大号纸箱装1200pcs产品每箱.
2. 5dBi圆形、5dBi梯形、5dBi刀形, 中号纸箱装450PCS产品每箱, 大号纸箱装1000pcs产品每箱.