

# 承 认 书

## APPROVAL SHEET

客户名称

CUSTOMER NAME:

产品名称

PRODUCT NAME: 2.4G FPC 内置天线 L=45mm+端子

客户料号

CUSTOMER P/N:

优比电子料号

Youbi P/N: UB01C45F1D38a2A REV: A

	MANUFACTURER SIGNATURE	CUSTOMER SIGNATURE
CHECKED BY:	Eddy 	
APPROVED BY:	工程专用章 Changxing. Liu	
DATE:	2023/4/14	

### Modification History

Version	Content Revision	Issued by	Date
A	Original version	Eddy	2023-4-14

## *Content*

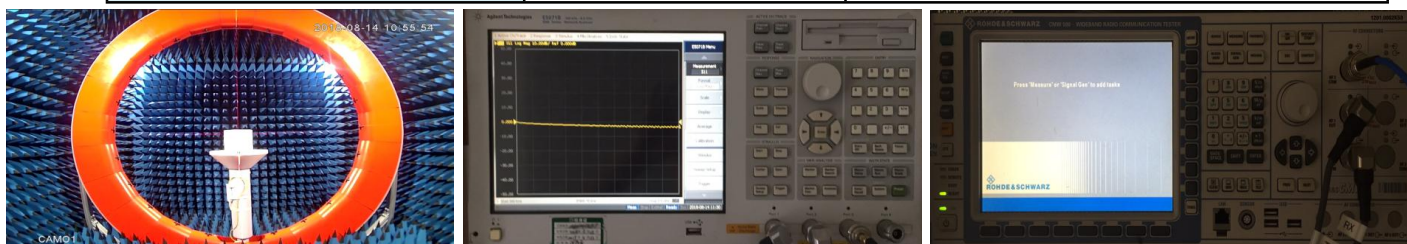
<i>Item</i>	<i>Description</i>
1.-----	Electrical Specification
2.-----	Test Items and Equipment
3.-----	S Parameter
4.-----	Efficiency and Gain
5.-----	Radiation Pattern
6.-----	Active test data
6.-----	Antenna installation diagram
7.-----	Mechanical Specification
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## 1. Electrical Specification:

Characteristics	Specifications	Unit
Outline Dimensions	33.7x18.3,L45	mm
Frequency	2400-2500	MHz
Impedance	50	$\Omega$
VSWR	< 2	
Polarization	Linear Polarization	
Gain	1.5±0.5	dBi
Efficiency	>40	%
Connector Type	RF 1	
Operating temperature	-20℃~+85℃	
Storage Temp	-20℃~+50℃	

## 2. Test Items and Equipment

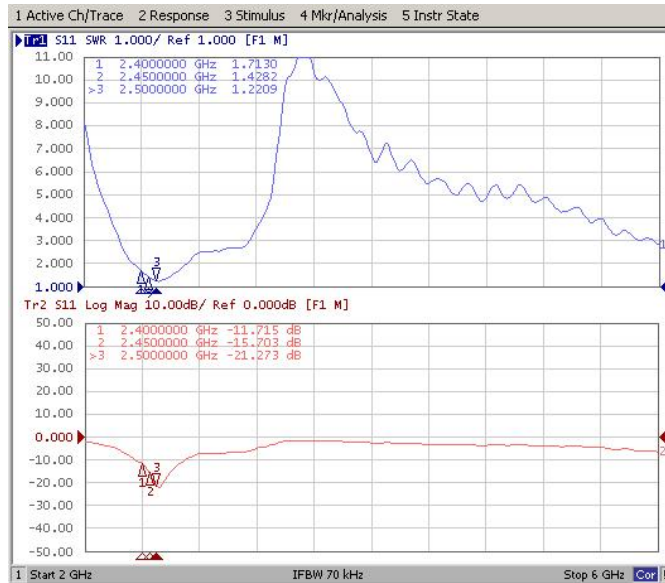
	Test items	Test equipment
S Parameter	1.Return Loss 2.VSWR	Network analyzer (Agilent E5071B)
The whole machine of Passive parameters	1.Frequency 2.Gain 3.Radiation Pattern	1.3D microwave darkroom (5m*5m*5m) 2.Network analyzer (Agilent E5071B)
The whole machine of Active parameters	1.TRP 2.TIS	1.3D microwave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



### 3. S Parameter

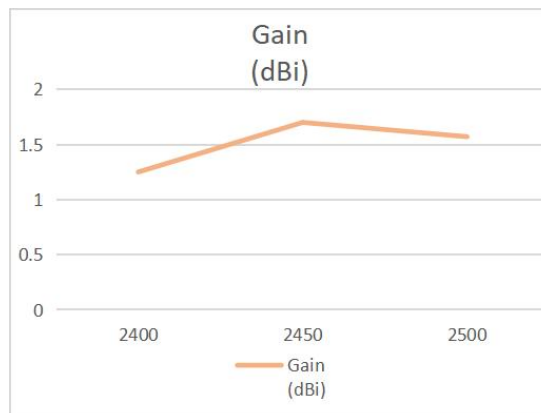
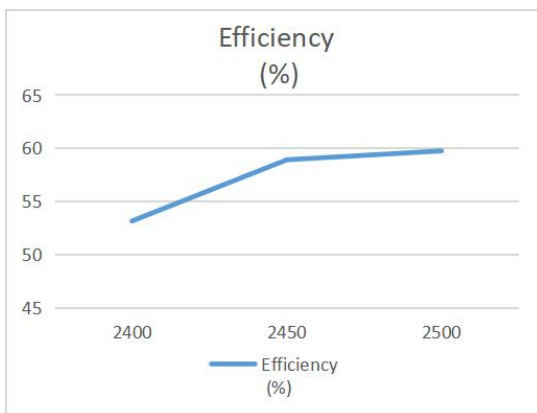
Frequency (MHz)	Return Loss (dB)	VSWR
2400	-11.71	1.71
2450	-15.70	1.42
2500	-21.27	1.22

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



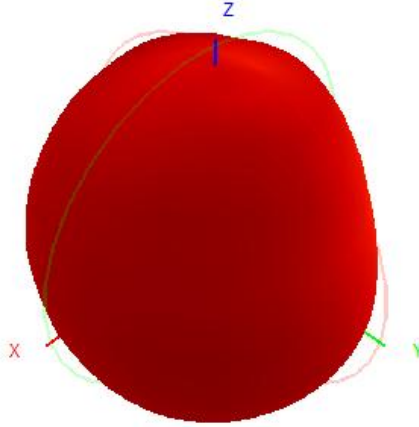
### 4. Efficiency and Gain

Frequency (MHz)	2400	2450	2500
Efficiency (%)	53.16	58.92	59.76
Gain (dBi)	1.25	1.70	1.57

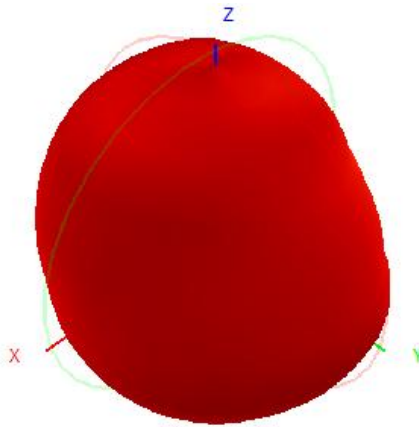


## 5. Radiation Pattern

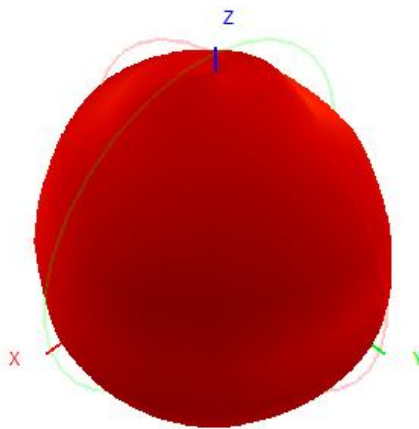
5-1 Antenna 3D Radiation Pattern



2400MHz



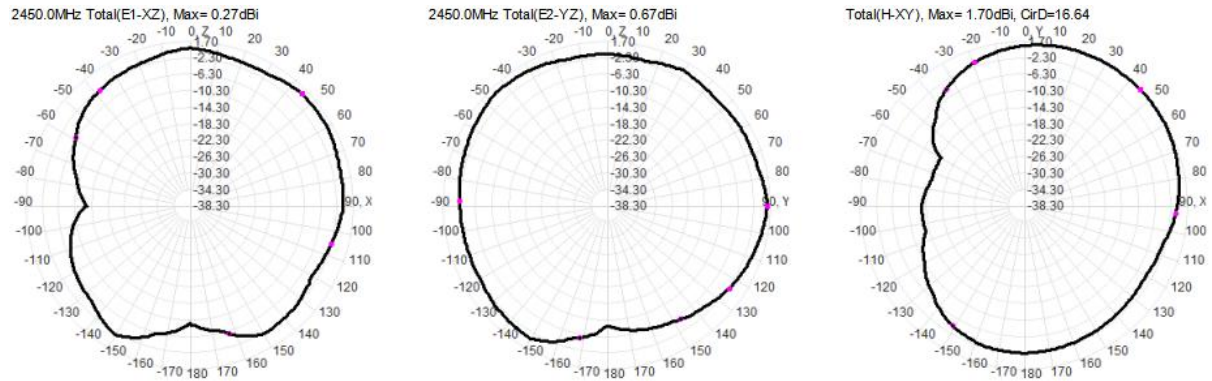
2450MHz



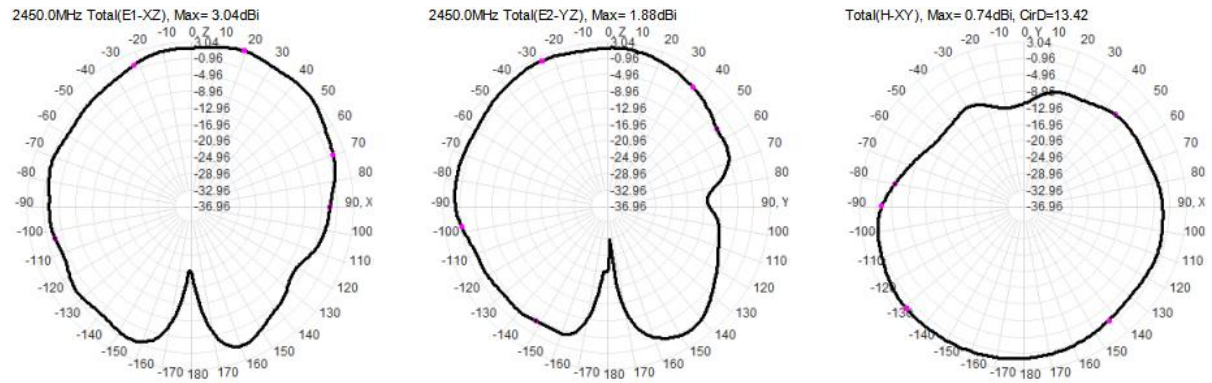
2500MHz



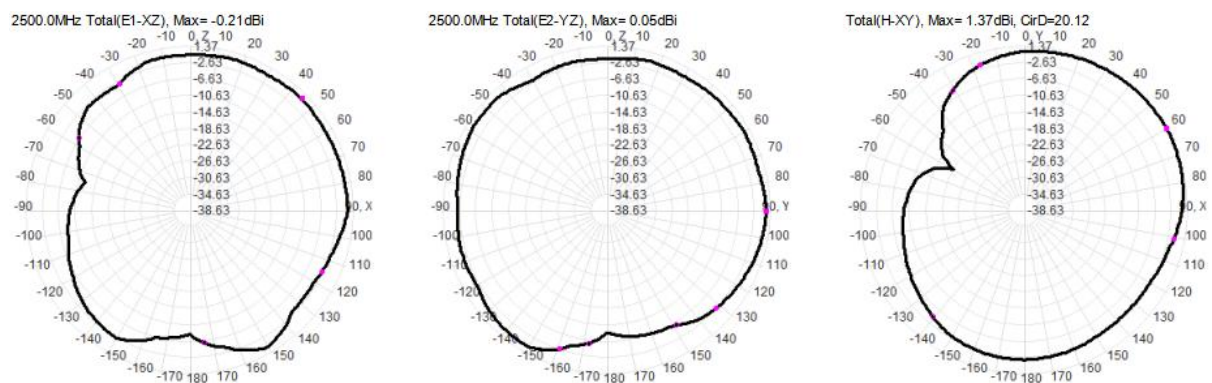
5-2 Antenna 2D Radiation Pattern



2400MHz



2450MHz



2500MHz

6. Active test data

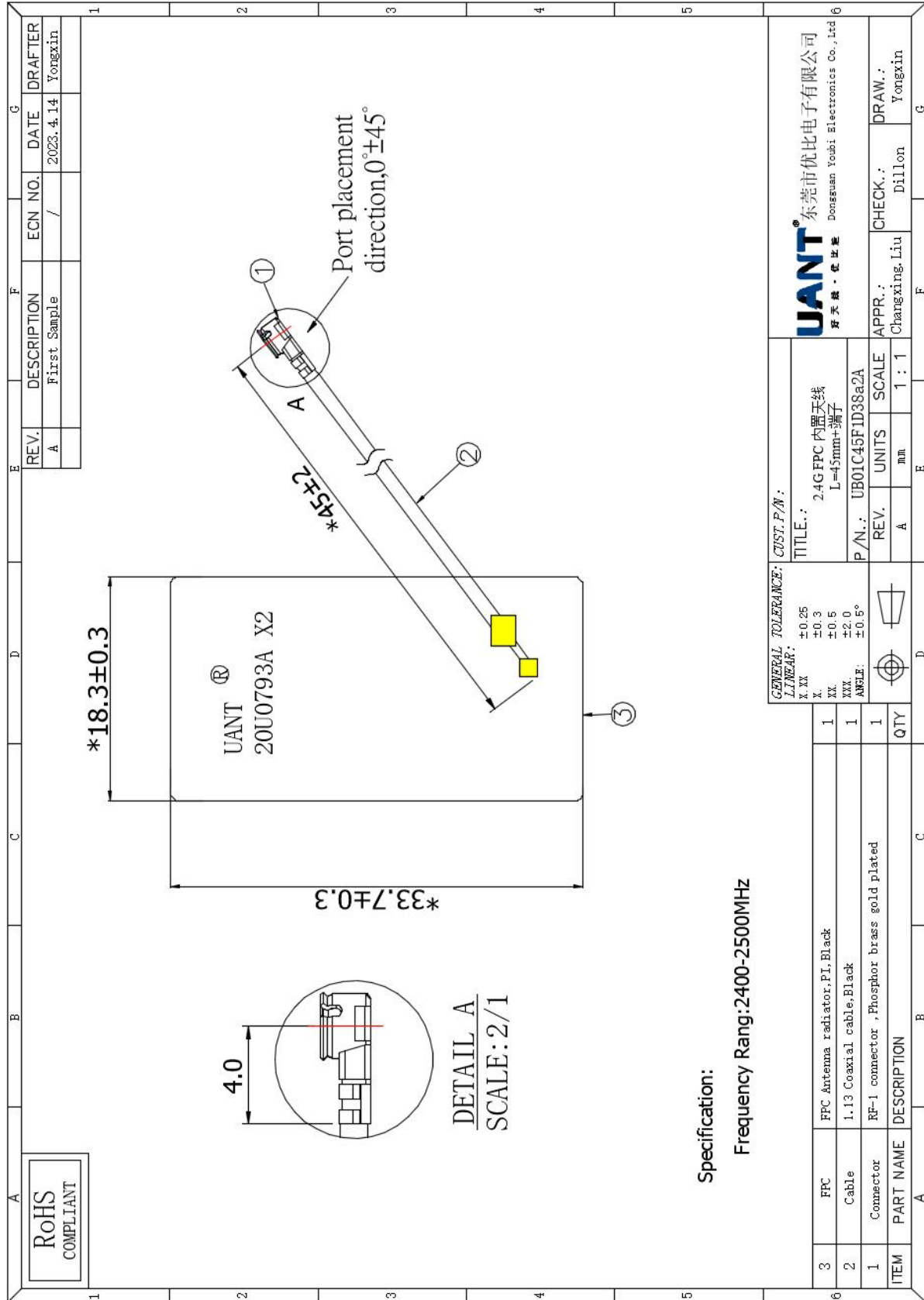
Item	Measurement	Total
1	TRP	16.49
6	TRP	15.67
11	TRP	15.46
1	TIS(EIRP)	-82.09
6	TIS(EIRP)	-82.42
11	TIS(EIRP)	-83.28

7. Antenna installation diagram

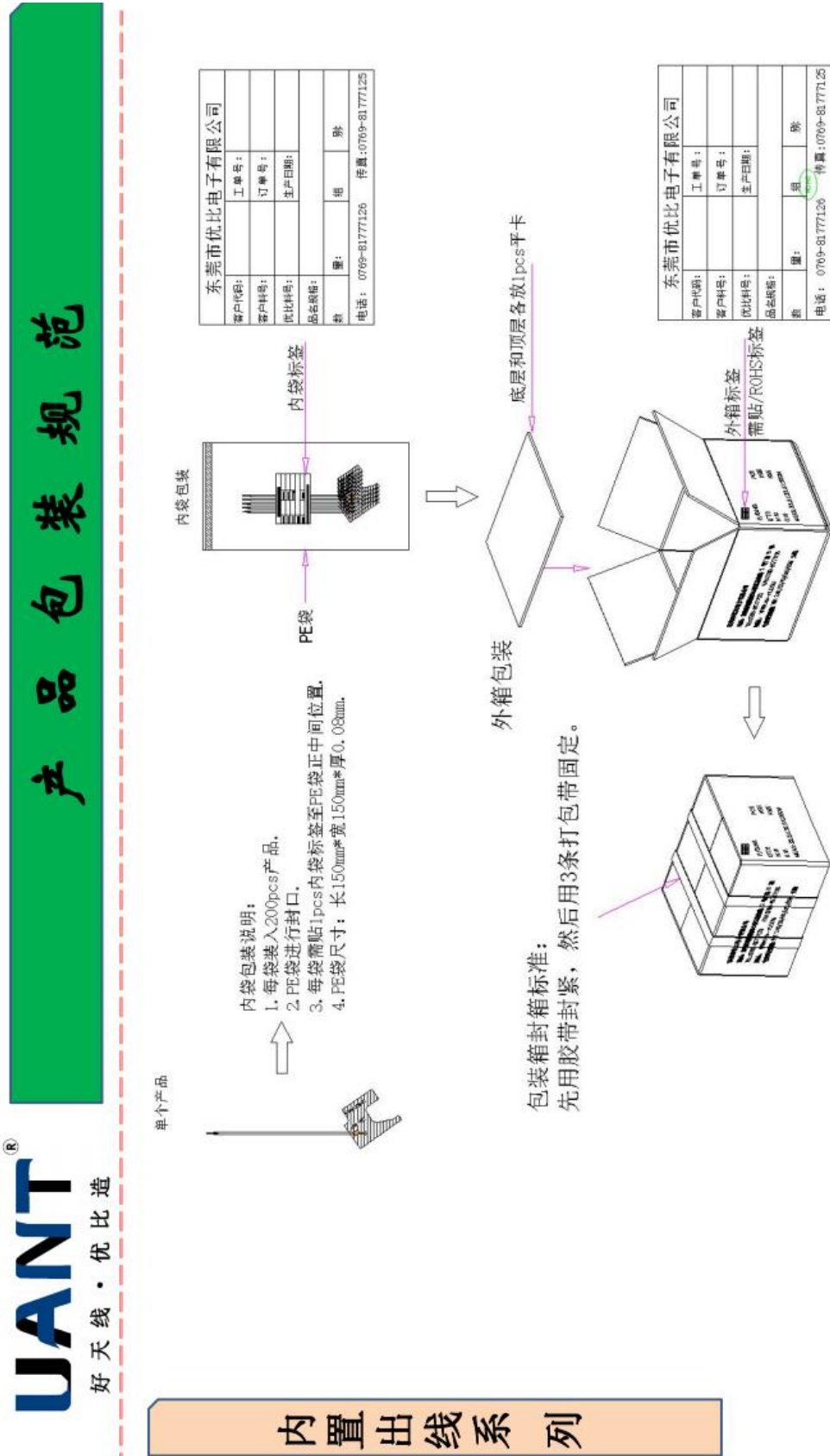




## 8. Mechanical Specification



## 9. Packaging



**注:** 此份包装规范适用于FPC, PCB天线类的线材总长<90mm带ipex和不带ipex产品, 属于通用类型.

1. **中号纸箱**装10000pcs产品每箱.