

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=140mm+端子

客 户 料 号

CUSTOMER P/N:

优比电子料号

Youbi P/N: UB01C140F3D4610A REV: A

	MANUFACTURER SIGNATURE	CUSTOMER SIGNATURE
CHECKED BY:	 Eddy	
APPROVED BY:	Changxing. Liu	
DATE:	2024/7/8	

Modification History

Version	Content Revision	Issued by	Date
A	Original version	Eddy	2024-5-15

Content

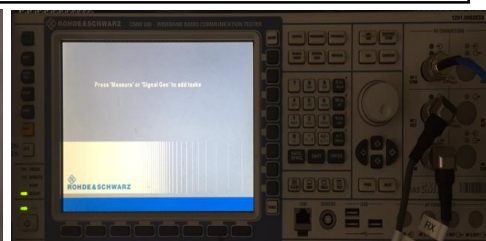
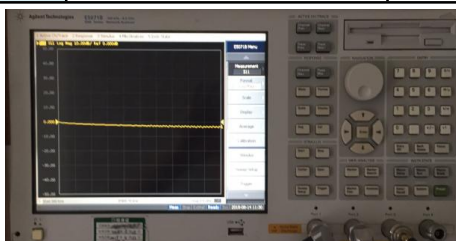
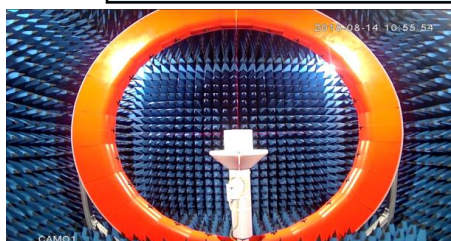
<i>Item</i>	<i>Description</i>
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1. Electrical Specification:

Characteristics	Specifications	Unit
Outline Dimensions	33x14.8.,L140	mm
Frequency	2400-2500	MHz
Impedance	50	Ω
VSWR	< 2	
Polarization	Linear Polarization	
Gain	3.5±0.5	dBi
Efficiency	>50	%
Connector Type	RF 1	
Operating temperature	-20℃~+85℃	
Storage Temp	-20℃~+50℃	

2. Test Items and Equipment

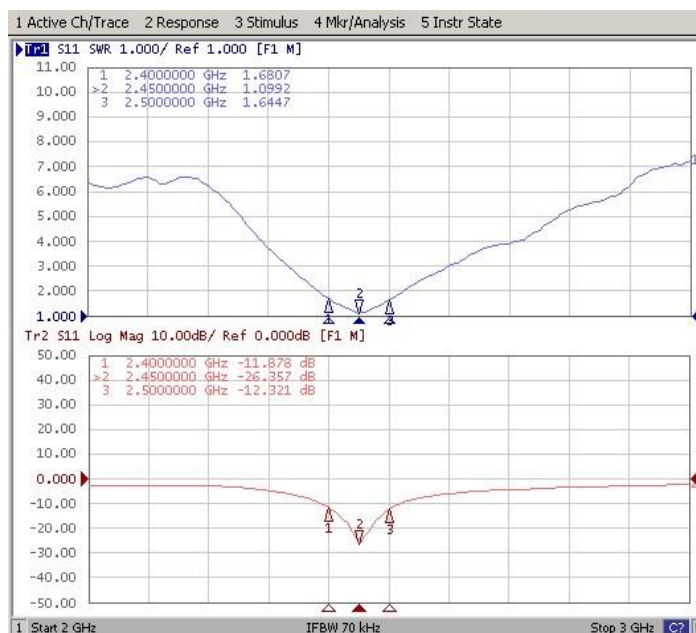
	Test items	Test equipment
S Parameter	1.Return Loss 2.VSWR	Network analyzer (Agilent E5071B)
The whole machine of Passive parameters	1.Frequency 2.Gain 3.Radiation Pattern	1.3D microwave darkroom (5m*5m*5m) 2.Network analyzer (Agilent E5071B)
The whole machine of Active parameters	1.TRP 2.TIS	1.3D microwave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



3. S Parameter

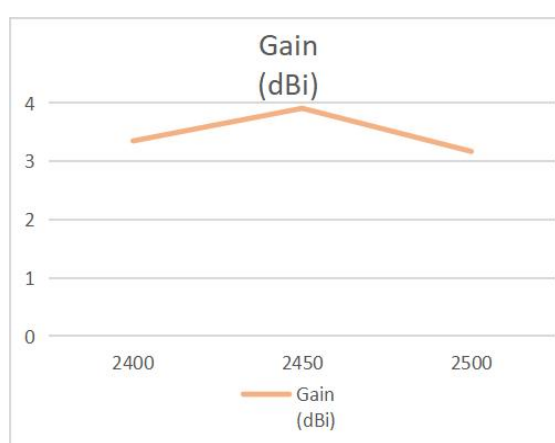
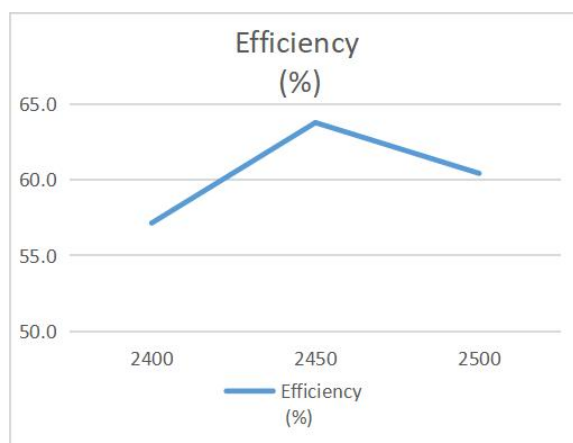
Frequency (MHz)	Return Loss (dB)	VSWR
2400	-11.87	1.68
2450	-26.35	1.09
2500	-12.32	1.64

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



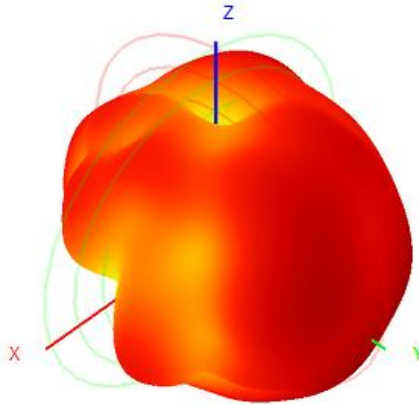
4. Efficiency and Gain

Frequency (MHz)	2400	2450	2500
Efficiency (%)	57.15	63.78	60.43
Gain (dBi)	3.35	3.91	3.17

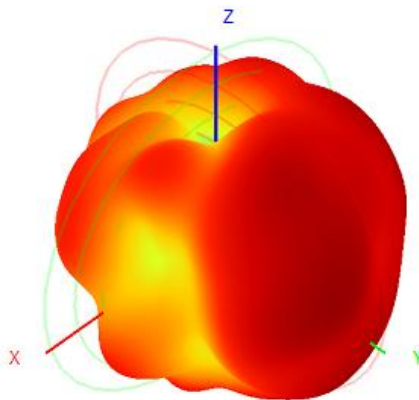


5. Radiation Pattern

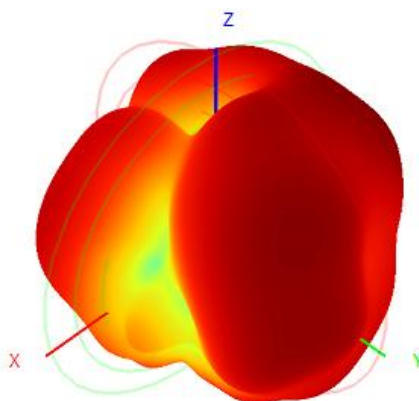
5-1 Antenna 3D Radiation Pattern



2400MHz

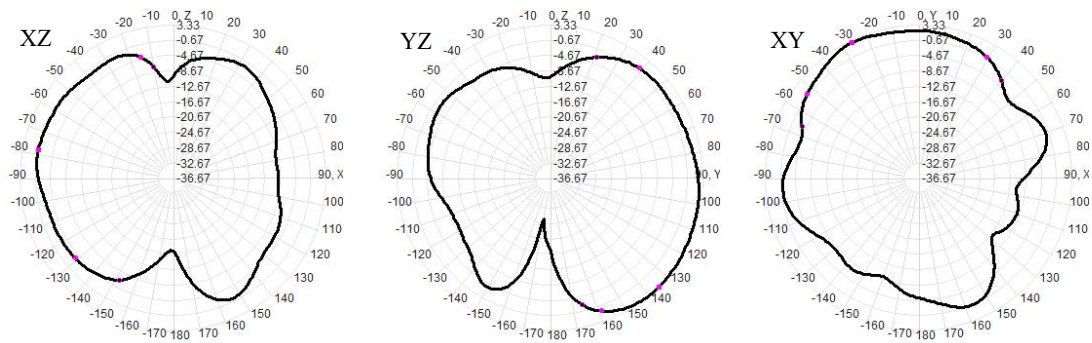


2450MHZ

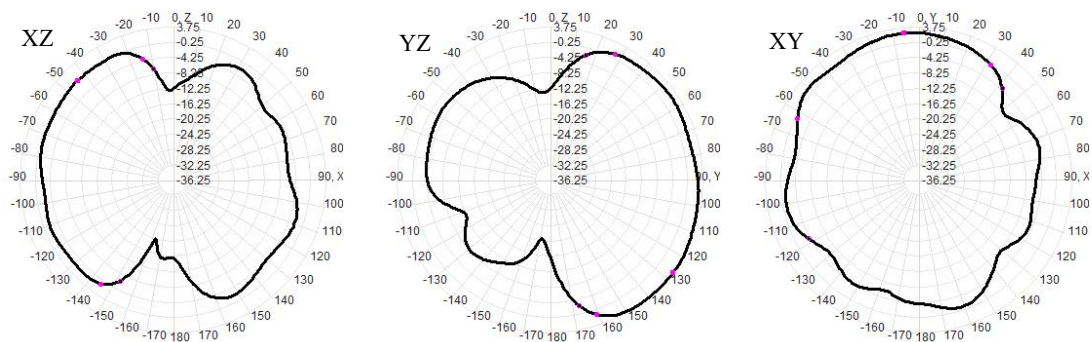


2500MHZ

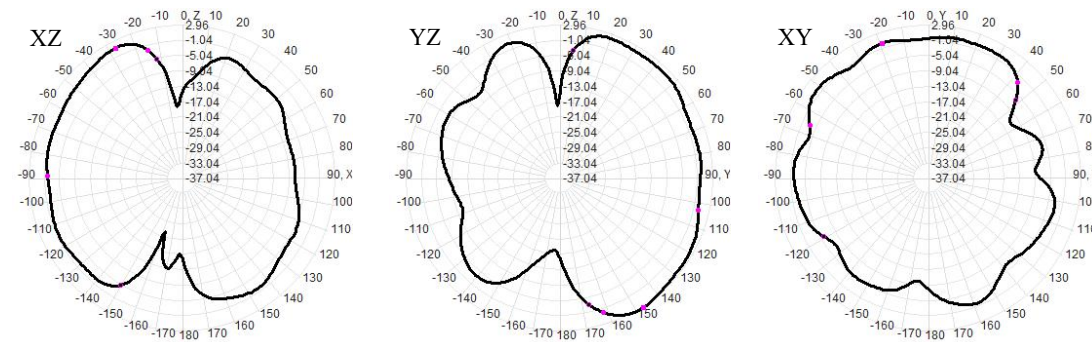
5-2 Antenna 2D Radiation Pattern



2400MHz



2450MHz



2500MHz

6. Active test data

6.1 传导数据

	ChannelNo.	Trp	Tis
BR	0	9.3	-89.3
	41	9.2	-88.3
	78	9	-88.3
EDR	0	2.6	-91
	41	2.5	-91.5
	78	2.3	-91.5
BLE	0	9.3	-93
	19	9.2	-93
	39	9	-93

6.2 有源数据

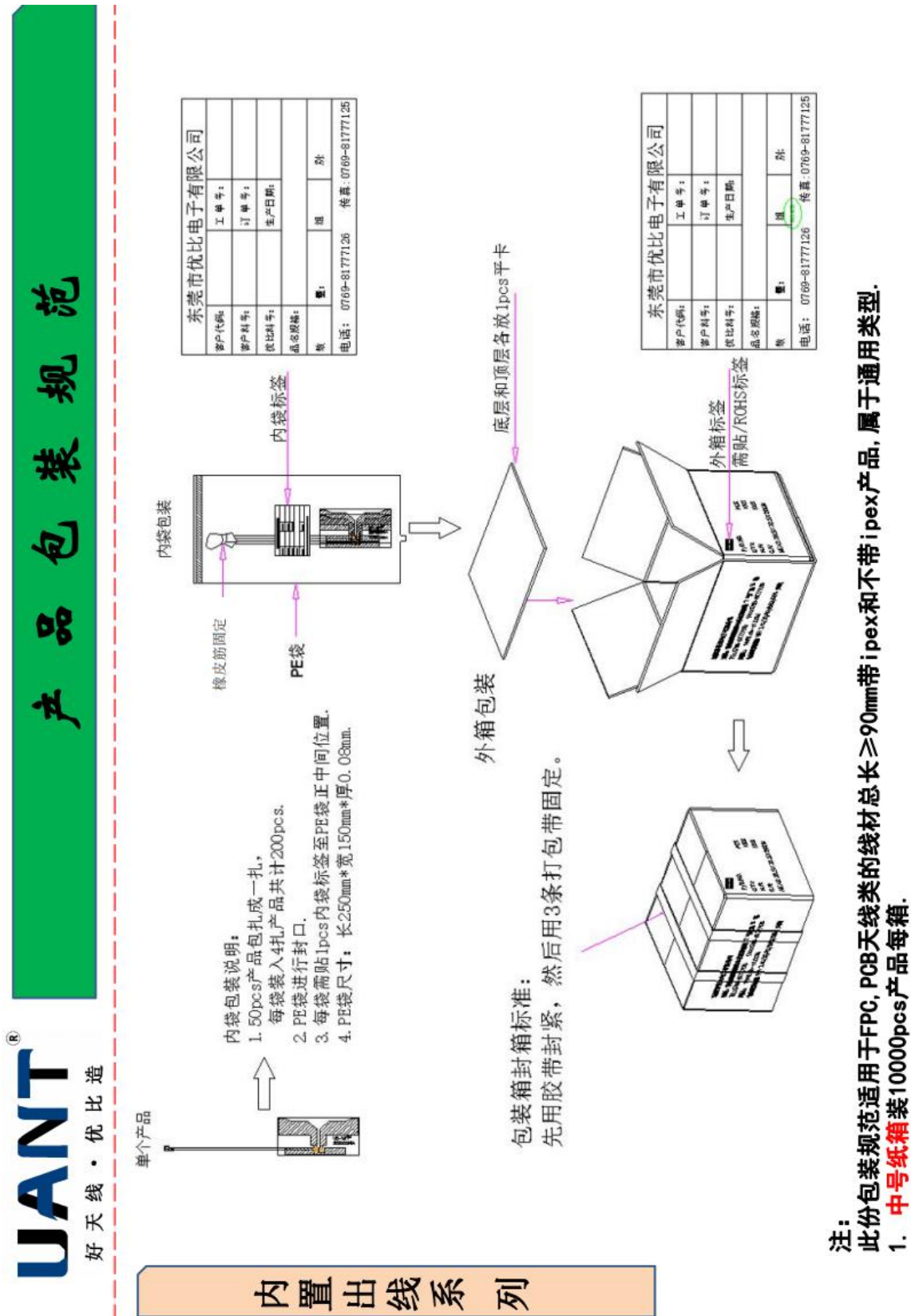
	ChannelNo.	Trp	Tis
BR	0	7.7	-85.1
	41	7.4	-85.1
	78	7.2	-84.5
EDR	0	0.8	-89.6
	41	0.7	-89.8
	78	0.4	-89.2
BLE	0	7.4	-90.8
	19	7.4	-91.4
	39	7.1	-91.1

7. Antenna installation diagram



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9. Packaging



注: 此份包装规范适用于FPC, PCB天线类的线材总长 $\geq 90\text{mm}$ 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.