

承 认 书

APPROVAL SHEET

客 户 名 称

CUSTOMER NAME:

产 品 名 称

PRODUCT NAME: 2.4G Metal Antenna

客 户 料 号

CUSTOMER P/N:

优比电子料号

Youbi P/N: UB01NJ2D993A REV: A

	MANUFACTURER SIGNATURE	CUSTOMER SIGNATURE
CHECKED BY:		
APPROVED BY:	Changxing. Liu	
DATE:	2023/1/5	

Modification History

Version	Content Revision	Issued by	Date
A	Original version	Eddy	2023-1-5

Content

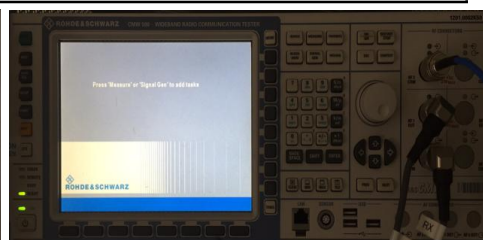
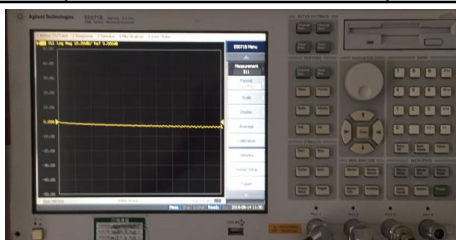
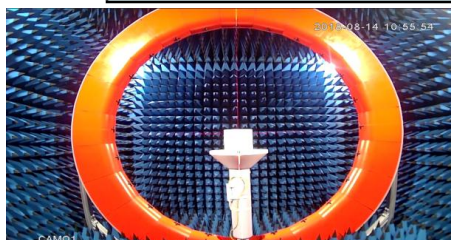
<i>Item</i>	<i>Description</i>
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1. Electrical Specification

Characteristics	Specifications	Unit
Outline Dimensions	18.3x14.4x4.7,T0.4	mm
Frequency	2400-2500	MHz
Impedance	50	Ω
VSWR	≤ 2.0	
Polarization	Linear Polarization	
Gain	2.5 $\pm$ 0.5	dBi
Efficiency	> 50	%
Connector Type	DIP	
Operating temperature	-20 $^{\circ}$ C~+85 $^{\circ}$ C	
Storage Temp	-20 $^{\circ}$ C~+50 $^{\circ}$ C	

2. Test Items and Equipment

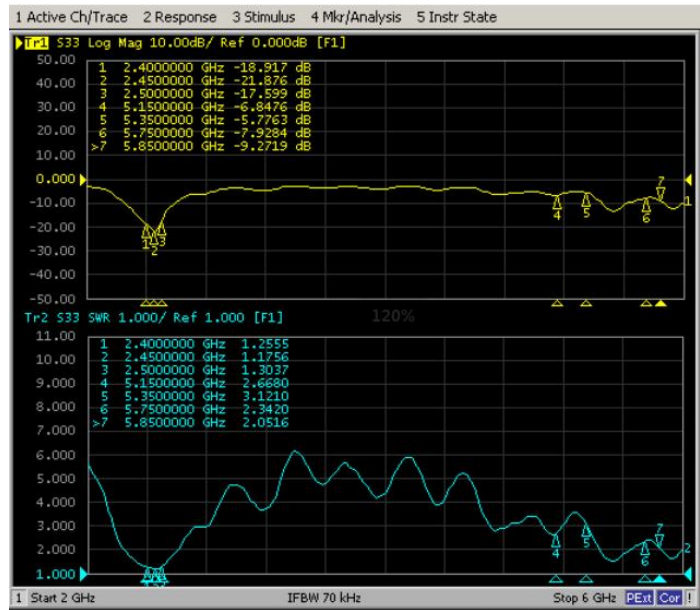
	Test items	Test equipment
S Parameter	1.Return Loss 2.VSWR	Network analyzer (Agilent E5071B)
The whole machine of Passive parameters	1.Frequency 2.Gain 3.Radiation Pattern	1.3D microwave darkroom (5m*5m*5m) 2.Network analyzer (Agilent E5071B)
The whole machine of Active parameters	1.TRP 2.TIS	1.3D microwave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



3. S Parameter

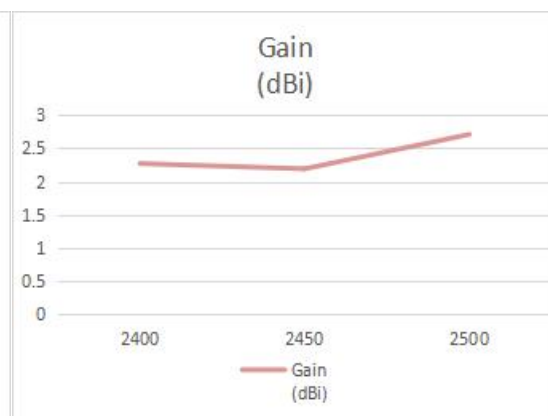
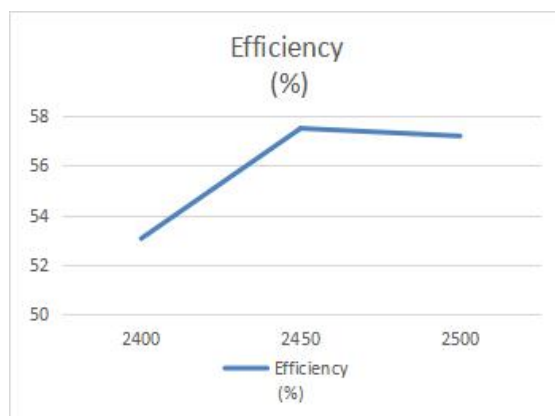
Frequency (MHz)	Return Loss (dB)	VSWR
2400	-18.91	1.25
2450	-21.87	1.17
2500	-17.59	1.30

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



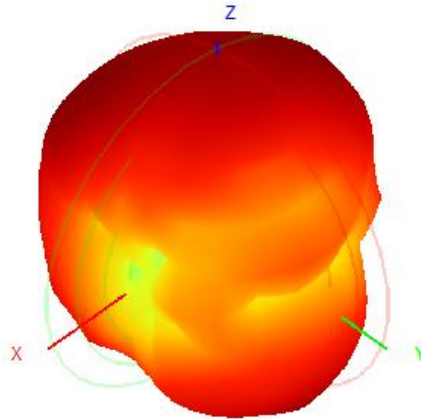
4. Efficiency and Gain

Frequency (MHz)	2400	2450	2500
Efficiency (%)	53.06	57.51	57.2
Gain (dBi)	2.27	2.19	2.71

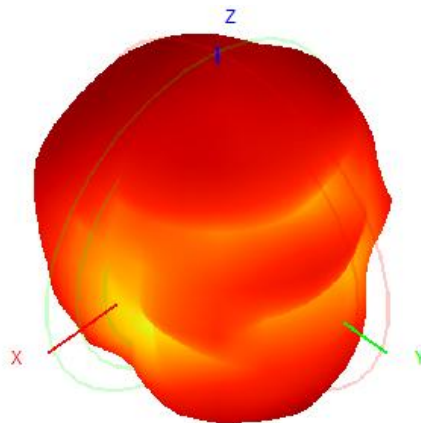


5. Radiation Pattern

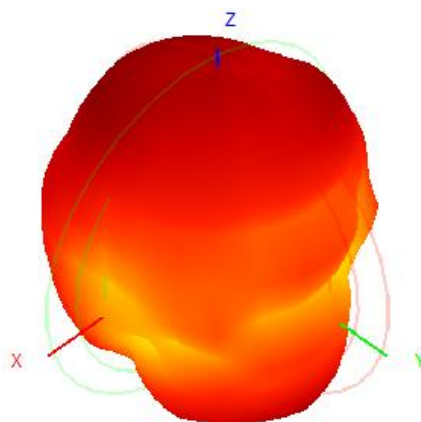
5-1 Antenna 3D Radiation Pattern



2400MHz

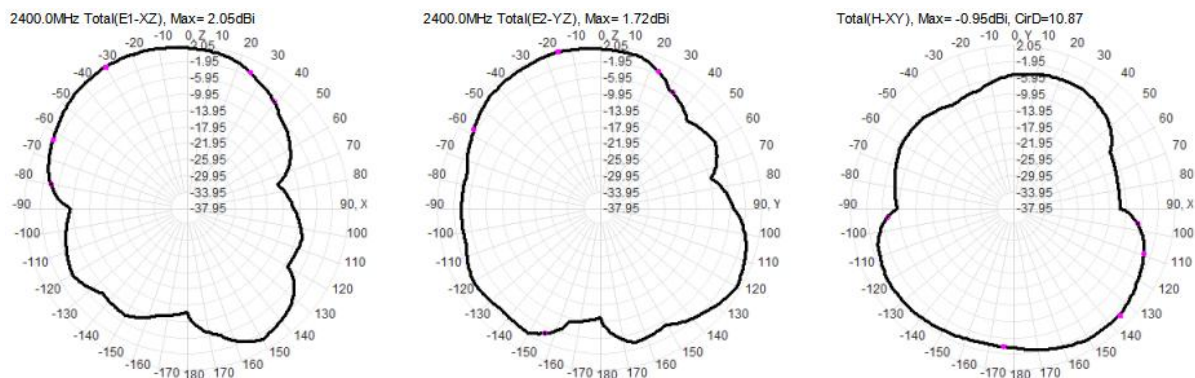


2450MHz

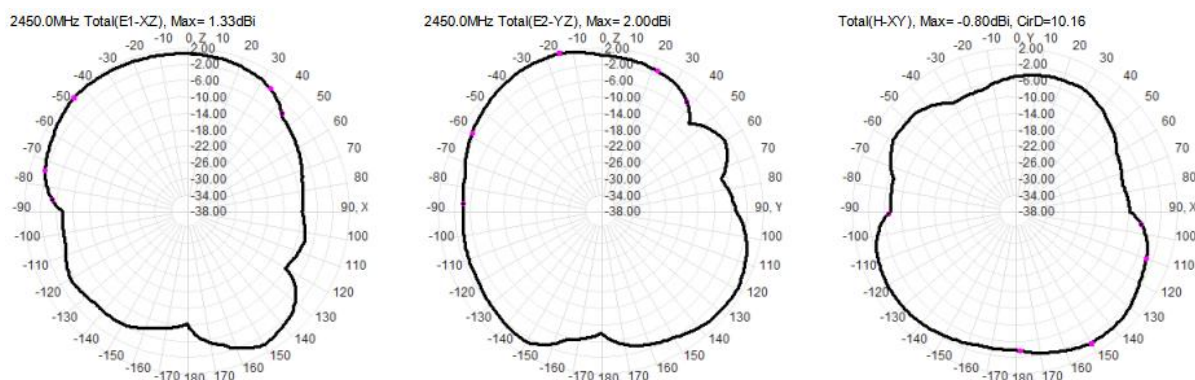


2500MHz

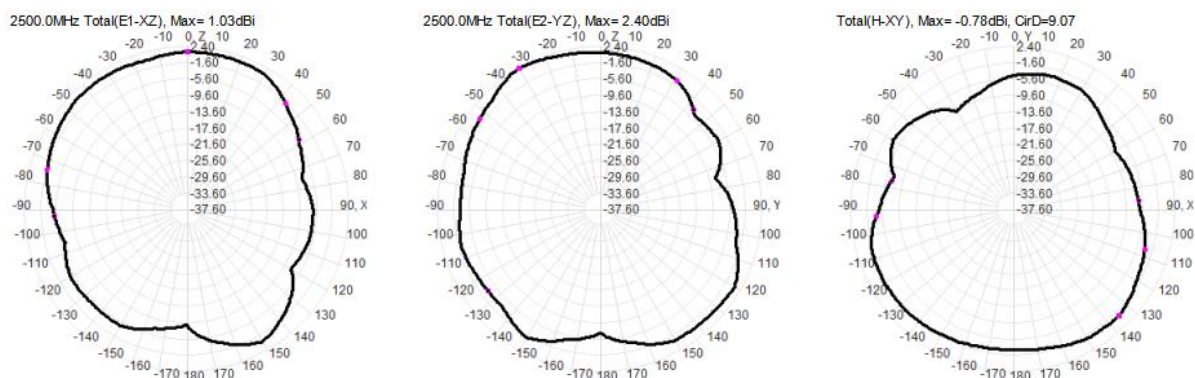
5-2 Antenna 2D Radiation Pattern



2400MHz



2450MHz



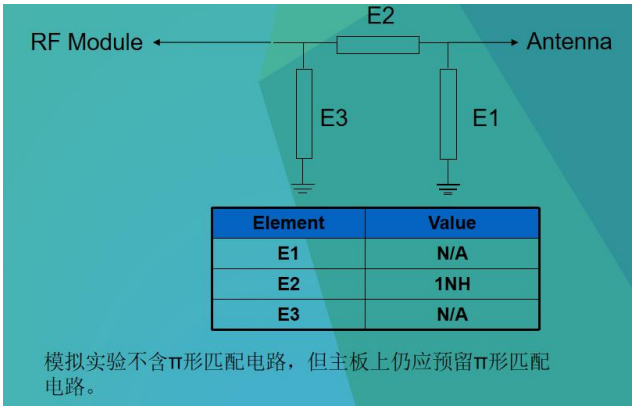
2500MHz

6. Active test data

Channel	TRP	TIS
11	17.96	80.12

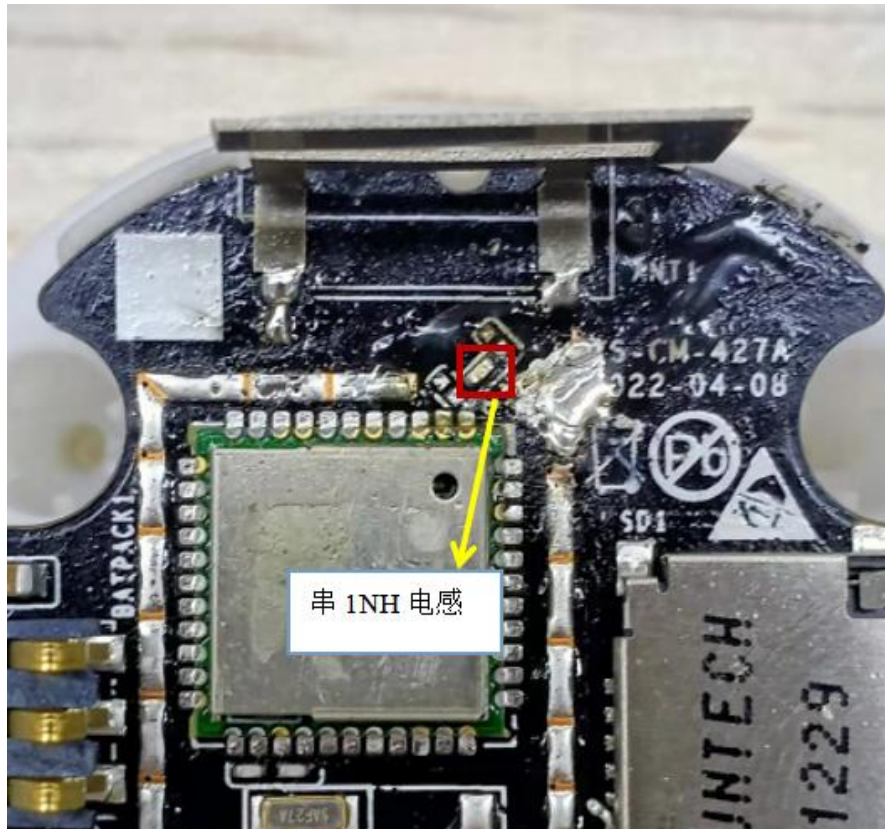
7. Antenna Matching Network

Element	Value
E1	N/A
E2	1NH
E3	10NH



8. Antenna installation diagram





9. Mechanical Specification

