

承 认 书

APPROVAL SHEET

客 户 名 称

CUSTOMER NAME:

产 品 名 称

PRODUCT NAME: 2.4G 板载天线

客 户 料 号

CUSTOMER P/N:

优比电子料号

Youbi P/N: UB-S5-009 REV: A

	MANUFACTURER SIGNATURE	CUSTOMER SIGNATURE
CHECKED BY:		
APPROVED BY:		
DATE:	2022/2/20	

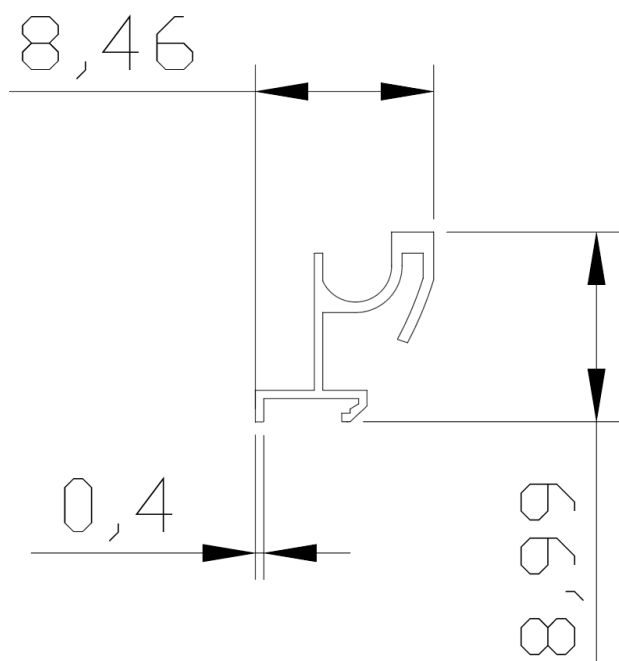
Modification History

Version	Content Revision	Issued by	Date
A	Original version	Yongxin. Lu	2022-2-20

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
7.-----	Antenna Matching Network

天线尺寸图:



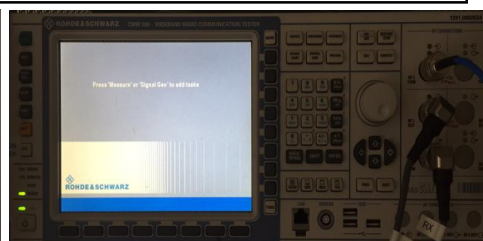
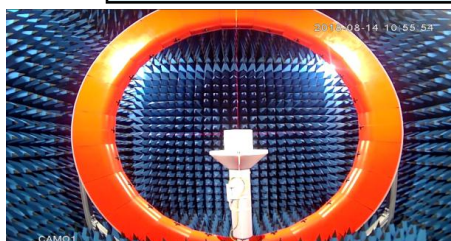
单位: M M

1. Electrical Specification:

Characteristics	Specifications	Unit
Outline Dimensions	9.4x8.3	mm
quency	2400-2500	MHz
Impedance	50	Ω
VSWR	< 2.0	
Polarization	Linear Polarization	
Gain	3.0±0.5	dBi
Efficiency	> 50	%
Connector Type	1.13MHF-1-Plug	
Operating temperature	-20℃~+65℃	
Storage Temp	-20℃~+50℃	

2. Test Items and Equipment

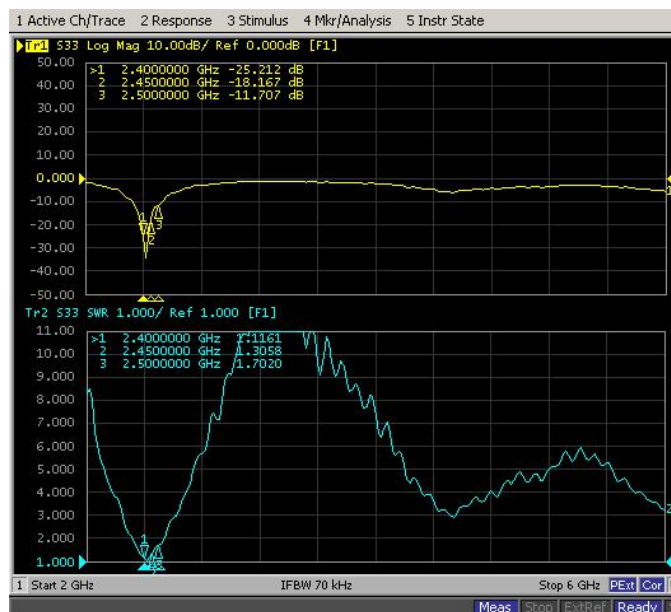
	Test items	Test equipment
S Parameter	1.Return Loss 2.VSWR	Network analyzer (Agilent E5071B)
The whole machine of Passive parameters	1.Frequency 2.Gain 3.Radiation Pattern	1.3D microwave darkroom (5m*5m*5m) 2.Network analyzer (Agilent E5071B)
The whole machine of Active parameters	1.TRP 2.TIS	1.3D microwave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



3. S Parameter

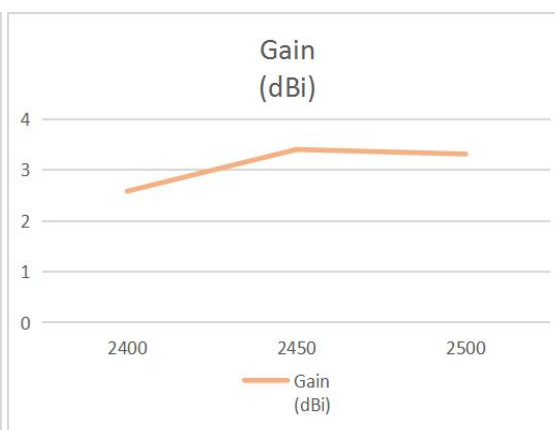
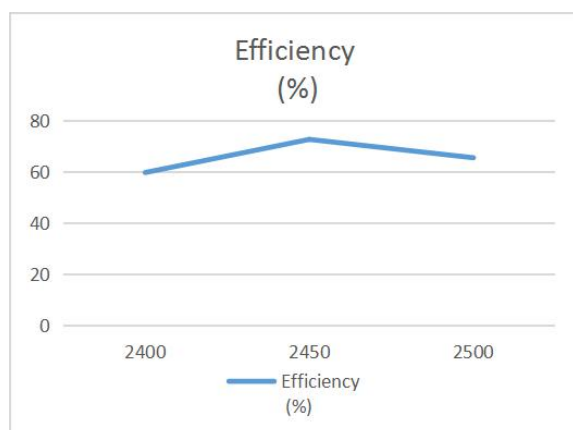
Frequency (MHz)	Return Loss (dB)	VSWR
2400	-25.21	1.11
2450	-18.16	1.30
2500	-11.70	1.70

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



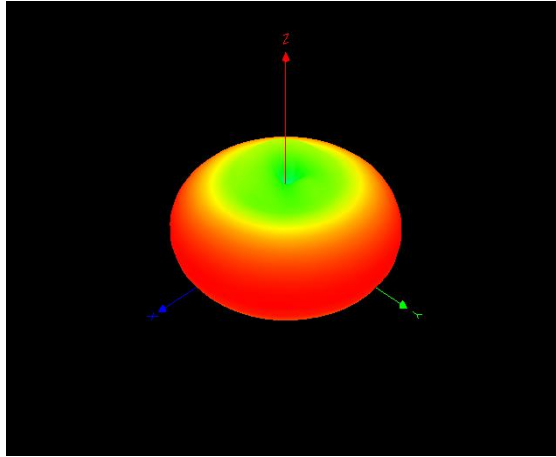
4. Efficiency and Gain

Frequency (MHz)	2400	2450	2500
Efficiency (%)	59.84	72.78	65.61
Gain (dBi)	2.58	3.4	3.31

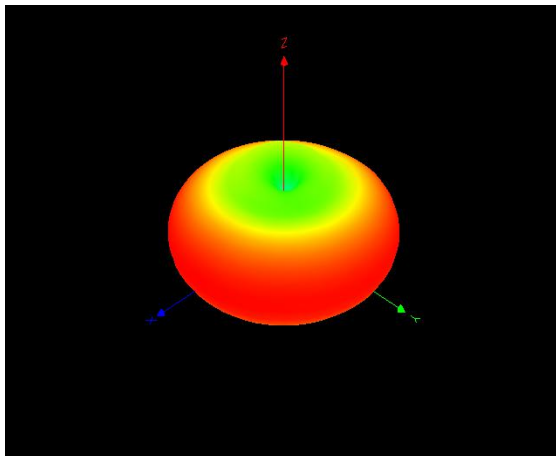


5. Radiation Pattern

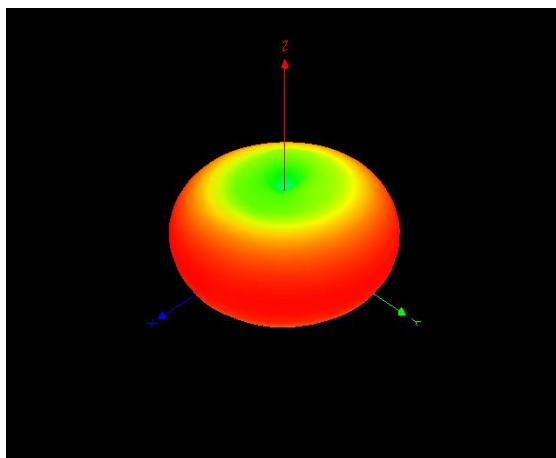
5-1 Antenna 3D Radiation Pattern



2400MHz

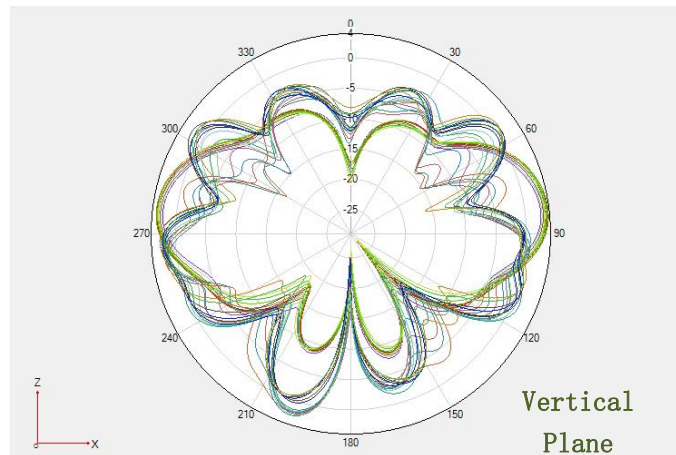


2450MHZ

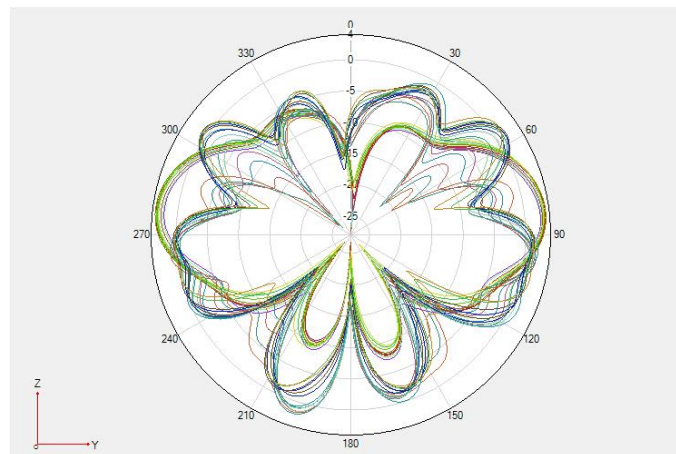


2500MHZ

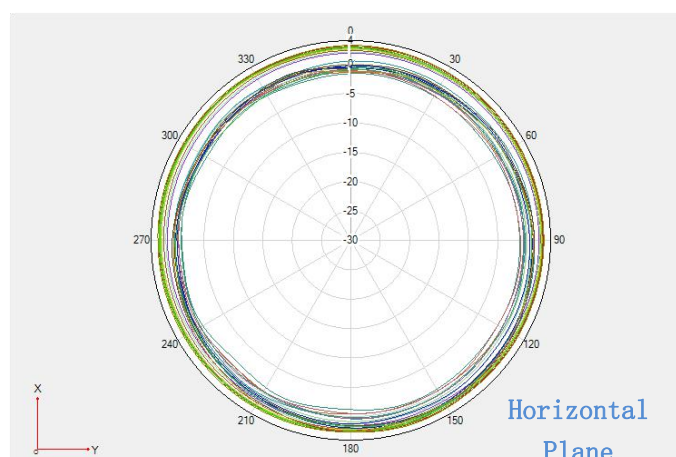
5-2 Antenna 2D Radiation Pattern



Phi 0 2D



Phi 90 2D



Theta 90 2D