

承 认 书

APPROVAL SHEET

客 户 名 称

CUSTOMER NAME:

产 品 名 称 2.4G 2dBi 小 SMA 公头母针黑色天线

PRODUCT NAME: 2.4G 2dBi small SMA male head female
needle black antenna

客 户 料 号

CUSTOMER P/N:

优比电子料号

Youbi P/N: UB02S83B2D4A REV: A

	MANUFACTURER SIGNATURE	CUSTOMER SIGNATURE
CHECKED BY:		
APPROVED BY:	Changxing.Liu	
DATE:	2022/09/15	

Modification History

Version	Content Revision	Issued by	Date
A	Original version	King	2022-09-15

Content

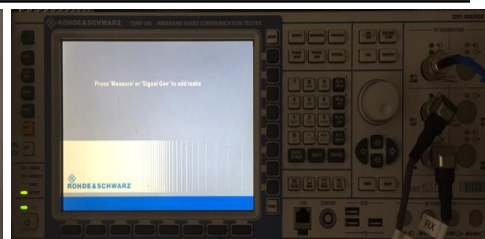
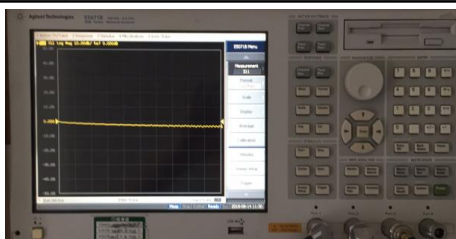
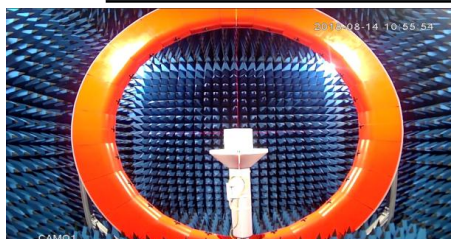
<i>Item</i>	<i>Description</i>
1.-----	Electrical Specification
2.-----	Test Items and Equipment
3.-----	S Parameter
4.-----	Efficiency and Gain
5.-----	Radiation Pattern
6.-----	Mechanical Specification

1. Electrical Specification:

Characteristics	Specifications	Unit
Outline Dimensions	Φ9.35x108	mm
Frequency	2400-2500	MHz
Impedance	50	Ω
Machine VSWR	< 1.92	
Polarization	Linear Polarization	
Gain	2.0 REF	dBi
Efficiency	> 65	%
Connector Type	1.13 MHF-1-Plug	
Operating temperature	-20℃~+65℃	
Storage Temp	-20℃~+65℃	

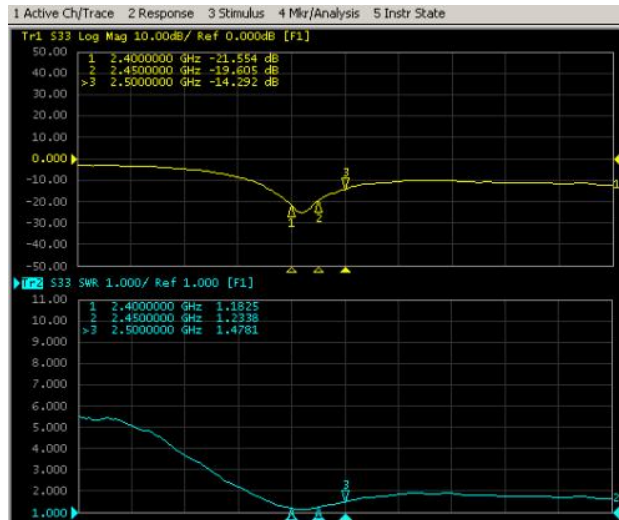
2. Test Items and Equipment

	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	-21.55	1.18
2450	-19.60	1.23
2500	-14.29	1.47



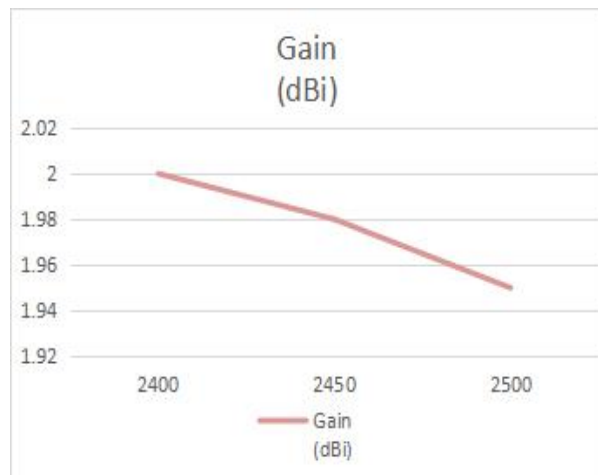
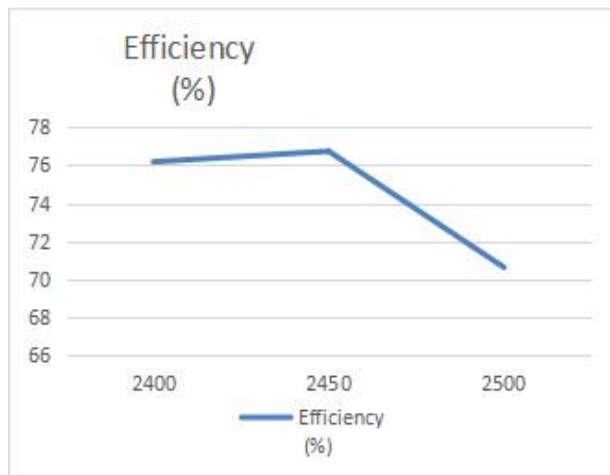
* Voltage Standing Wave Ratio(VSWR)

Return Loss(RL)

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

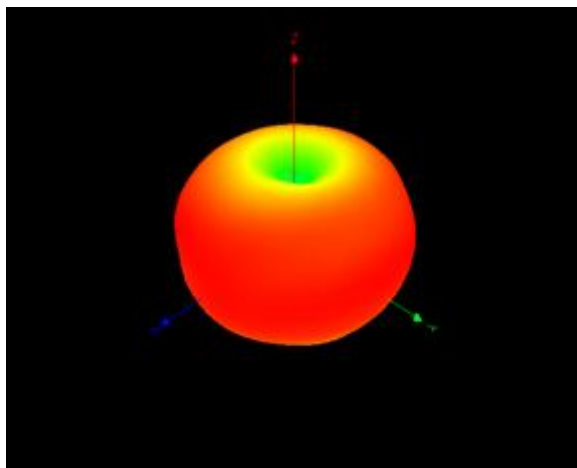
4. Efficiency and Gain

Frequency (MHz)	2400	2450	2500
Efficiency (%)	76.18	76.74	70.63
Gain (dBi)	2	1.98	1.95

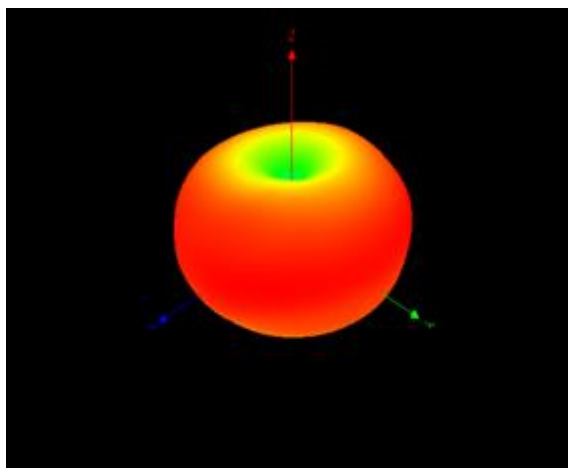


5. Radiation Pattern

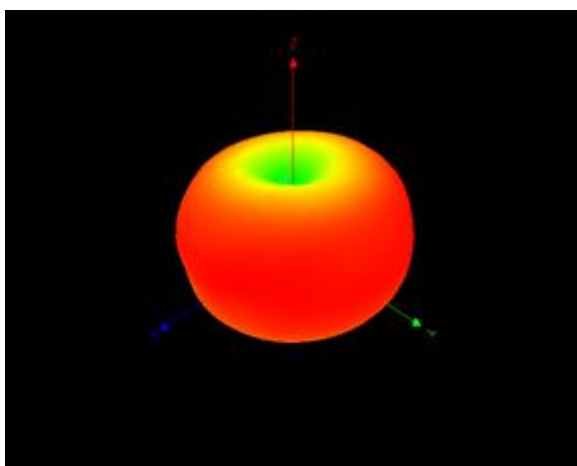
5-1 Antenna 3D Radiation Pattern



2400MHz

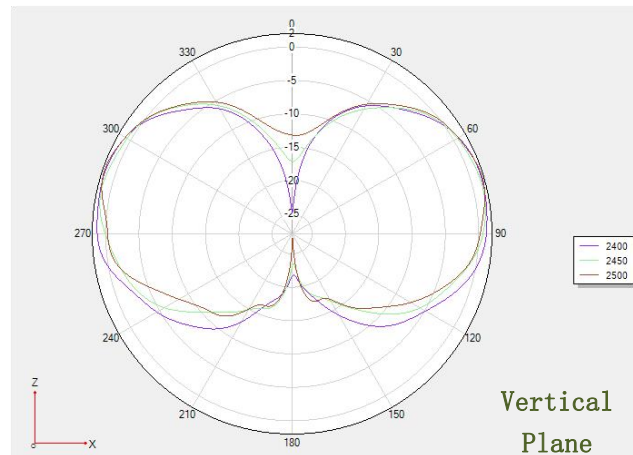


2450MHz

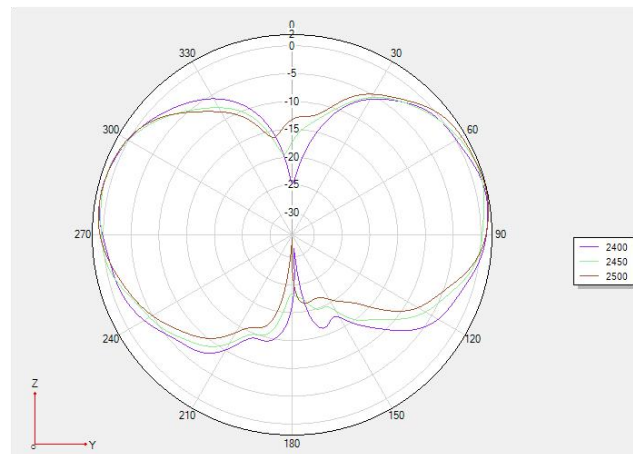


2500MHz

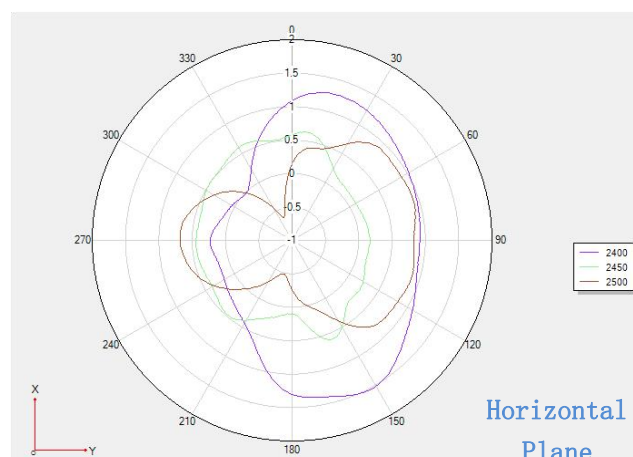
5-2 Antenna 2D Radiation Pattern



Phi 0 2D



Phi 90 2D



Theta 90 2D

6. Mechanical Specification:

