

# 承 认 书

## APPROVAL SHEET

客 户 名 称

CUSTOMER NAME:

产 品 名 称

PRODUCT NAME: 2.4G W70 白色天线 L=130mm+端子

客 户 料 号

CUSTOMER P/N:

优比电子料号

Youbi P/N: UB02C130W3D2511A REV: B

|              | MANUFACTURER<br>SIGNATURE                                                                          | CUSTOMER<br>SIGNATURE |
|--------------|----------------------------------------------------------------------------------------------------|-----------------------|
| CHECKED BY:  | Yongxin. Lu<br> |                       |
| APPROVED BY: | Changxing. Liu                                                                                     |                       |
| DATE:        | 2021/10/29                                                                                         |                       |

## Modification History

| Version | Content Revision | Issued by   | Date       |
|---------|------------------|-------------|------------|
| A       | Original version | Yongxin. Lu | 2021-10-23 |
|         |                  |             |            |
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## *Content*

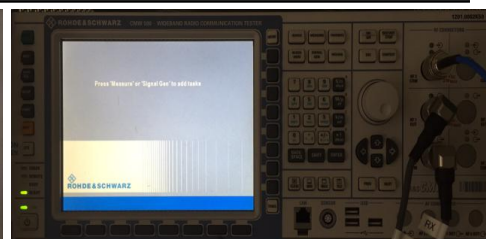
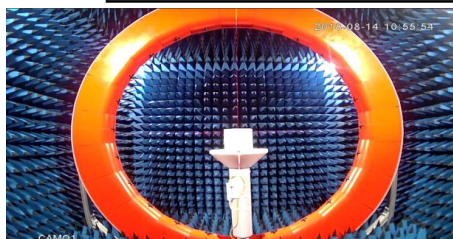
| <i>Item</i> | <i>Description</i>       |
|-------------|--------------------------|
| 1.-----     | Electrical Specification |
| 2.-----     | Test Items and Equipment |
| 3.-----     | S Parameter              |
| 4.-----     | Efficiency and Gain      |
| 5.-----     | Radiation Pattern        |
| 6.-----     | Mechanical Specification |
| 7.-----     | Packaging                |

## 1. Electrical Specification:

| Characteristics       | Specifications                    | Unit     |
|-----------------------|-----------------------------------|----------|
| Outline Dimensions    | 13x105,L130                       | mm       |
| Frequency             | 2400-2500                         | MHz      |
| Impedance             | 50                                | $\Omega$ |
| VSWR                  | $\leq 1.92$                       |          |
| Polarization          | Linear Polarization               |          |
| Gain                  | 3.0 $\pm$ 0.5                     | dBi      |
| Efficiency            | >50                               | %        |
| Connector Type        | MHF-1-Plug                        |          |
| Operating temperature | -20 $^{\circ}$ C~+50 $^{\circ}$ C |          |
| Storage Temp          | -20 $^{\circ}$ C~+50 $^{\circ}$ C |          |

## 2. Test Items and Equipment

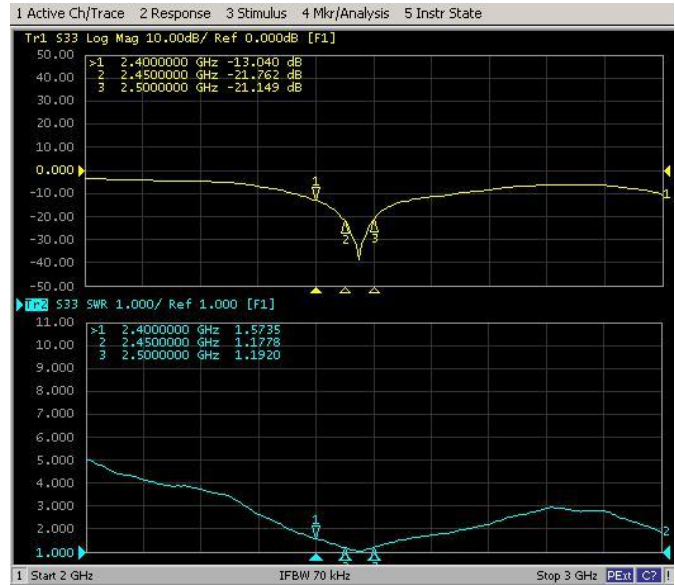
|                                            | Test items                                   | Test equipment                                                                       |
|--------------------------------------------|----------------------------------------------|--------------------------------------------------------------------------------------|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



### 3. S Parameter

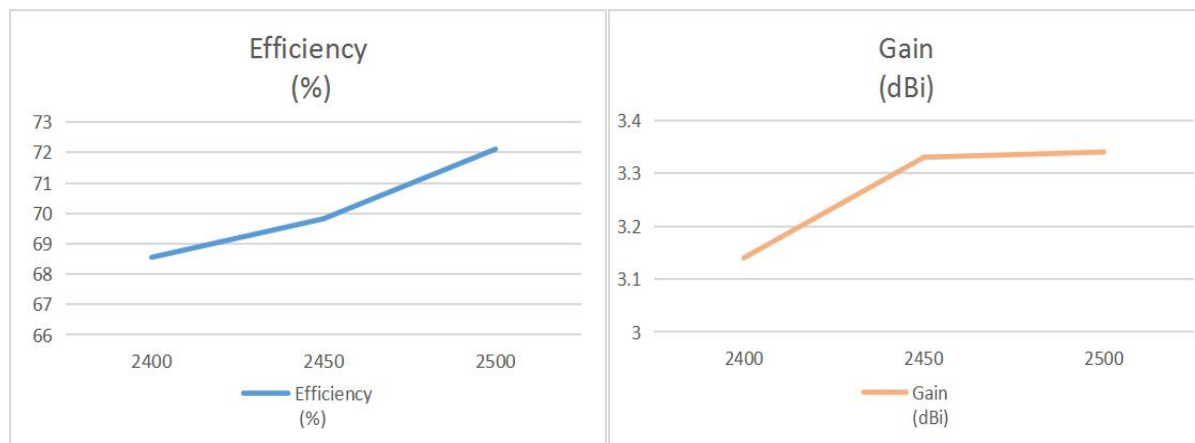
| Frequency (MHz) | Return Loss (dB) | VSWR |
|-----------------|------------------|------|
| 2400            | -13.04           | 1.57 |
| 2450            | -21.76           | 1.17 |
| 2500            | -21.14           | 1.19 |

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



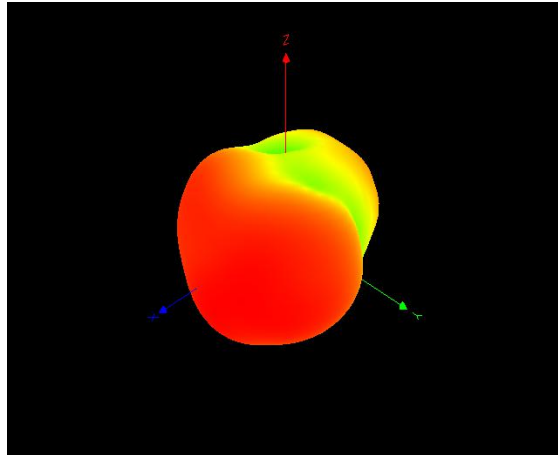
### 4. Efficiency and Gain

| Frequency (MHz) | 2400  | 2450  | 2500  |
|-----------------|-------|-------|-------|
| Efficiency (%)  | 68.55 | 69.82 | 72.11 |
| Gain (dBi)      | 3.14  | 3.33  | 3.34  |

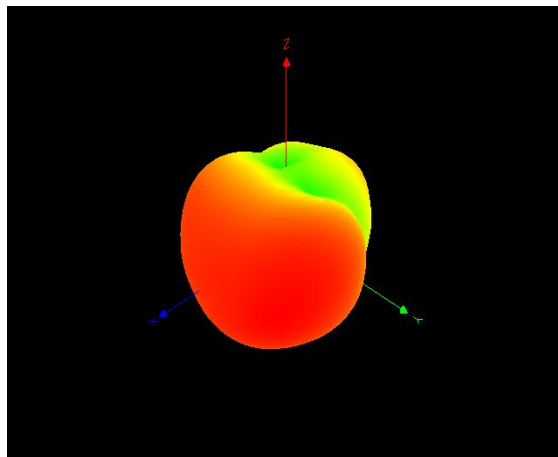


## 5. Radiation Pattern

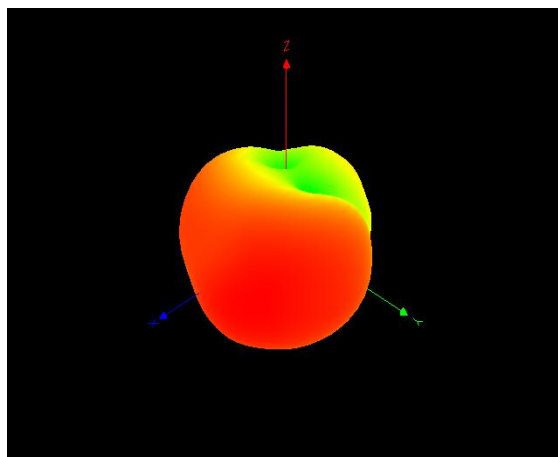
5-1 Antenna 3D Radiation Pattern



2400MHz

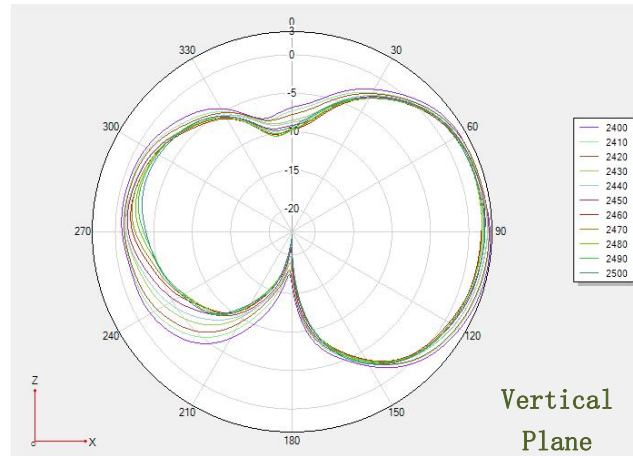


2450MHz

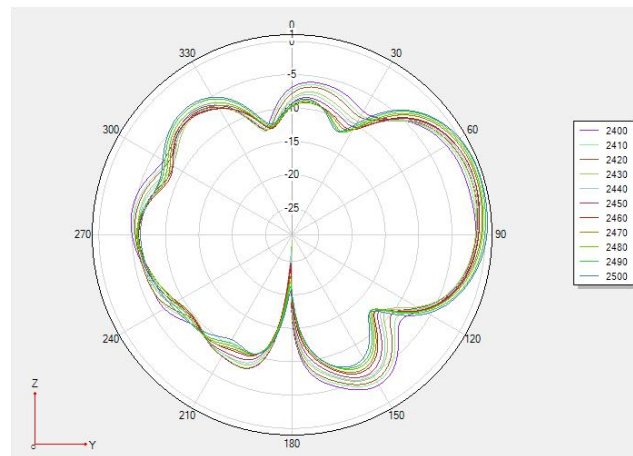


2500MHz

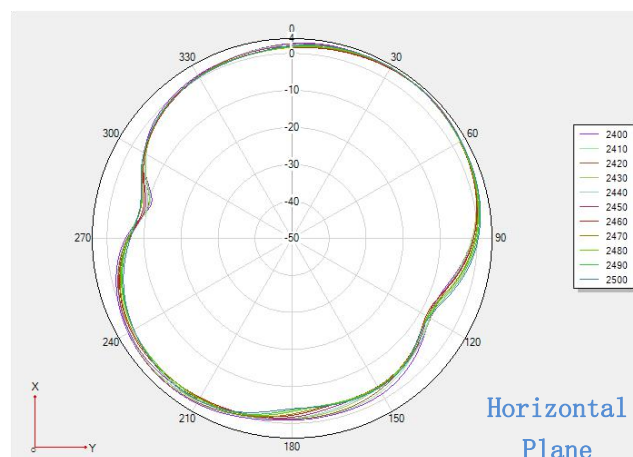
## 5-2 Antenna 2D Radiation Pattern



Phi 0 2D

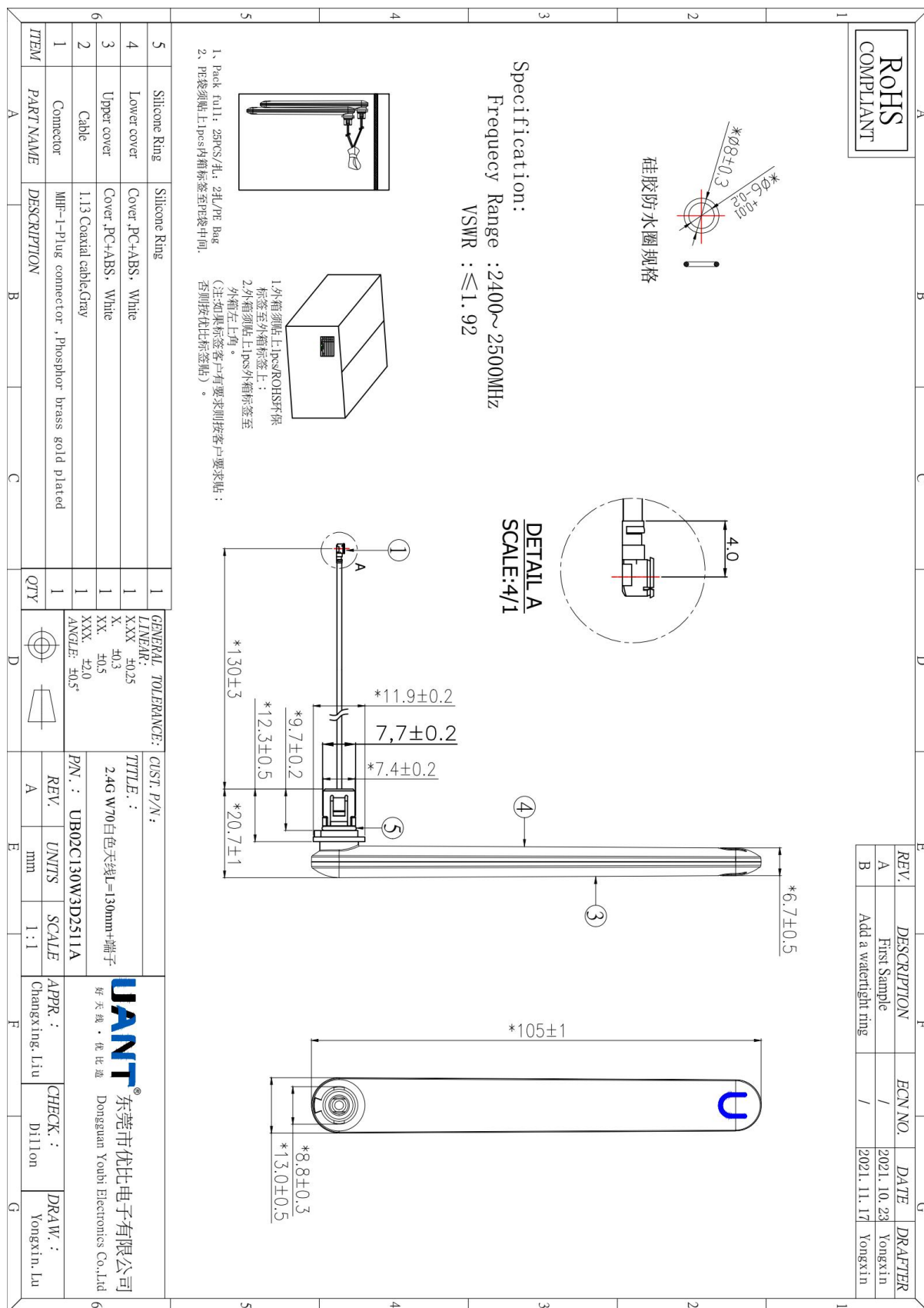


Phi 90 2D



Theta 90 2D

## 6. Mechanical Specification:



## 7. Packaging

