

# Shenzhen SKYLink Technology Co.,Ltd

## Antenna Specification for Approval

Customer Name: \_\_\_\_\_

Product Name: \_\_\_\_\_ PCB Antenna

Part NO. : \_\_\_\_\_ 5102A Digital microscope

Write By: \_\_\_\_\_ Damon Cui

Issued Date: \_\_\_\_\_ 2025.07.02

Customer

R&D Dept	Business Dept	Approved By

SKYLink

R&D Dept	Engineer Dept	Approval

## ● Specification Summary

A. Electrical Characteristics	
Frequency	2400MHz ~2500MHz
Return Loss	<-9.0 dbi
Efficiency	>20%
Peak Gain	1.21dbi
Impedance	50 Ohm
Polarization	Line
B. Material & Mechanical Characteristics	
Material of Radiator	Cu
Cable Type	/
Connector Type	/
Dimension	At Attachment
Heat-durability	280±5℃, 10sec.
C. Environmental Characteristics	
Operation Temperature	- 20 °C ~ + 80 °C
Storage Temperature	- 30 °C ~ + 85 °C

## ● Test Equipment & Conditions

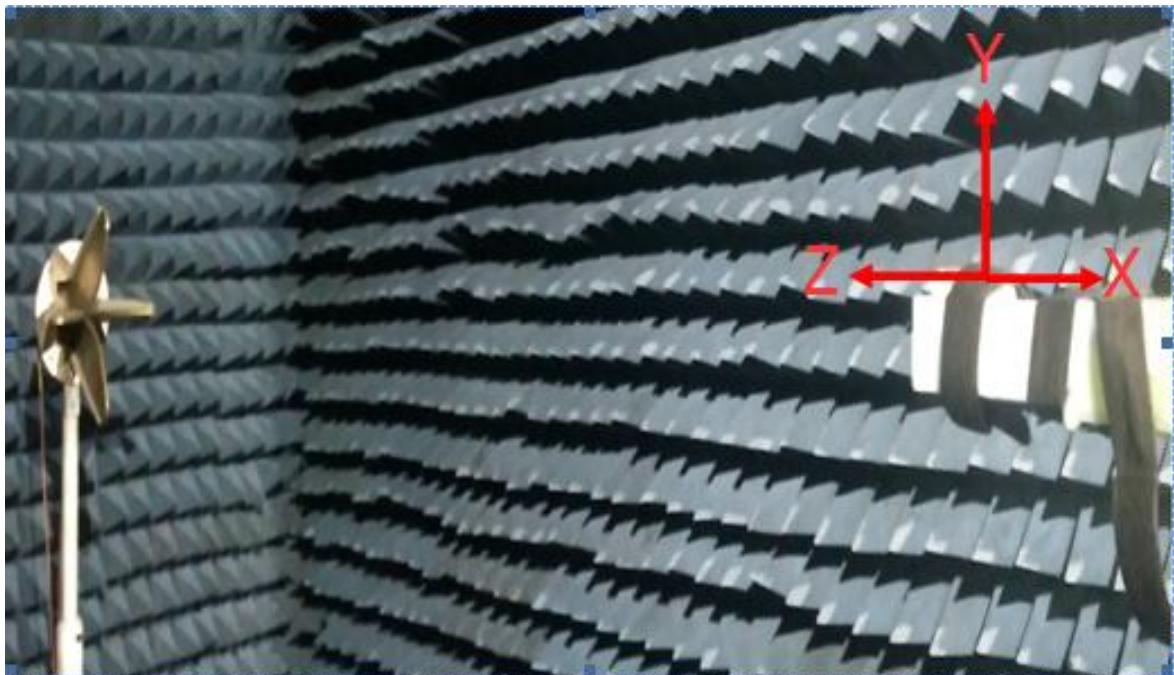
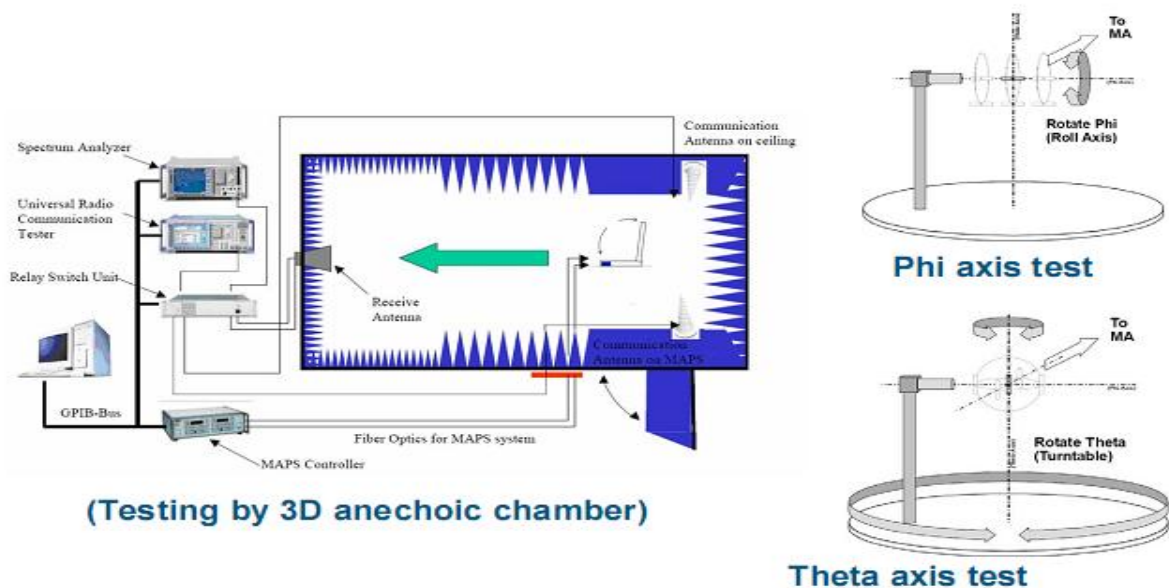
### 1. Network Analyzers :

Agilent 8753D 5071B

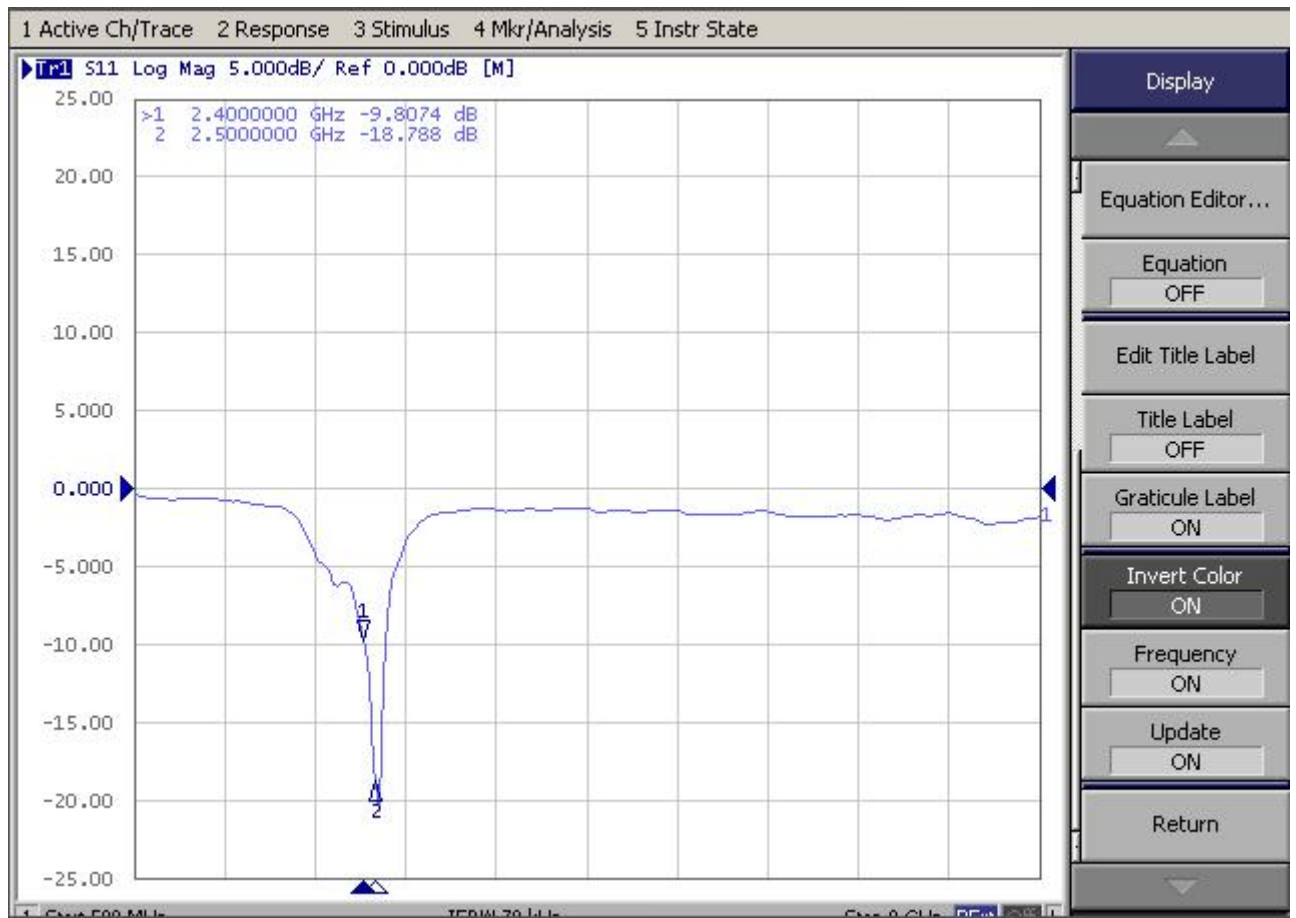
#### Communications Test Set:

Agilent E5515C CMW500

### 2. 3D Chamber Test System



## ◆ Return Loss

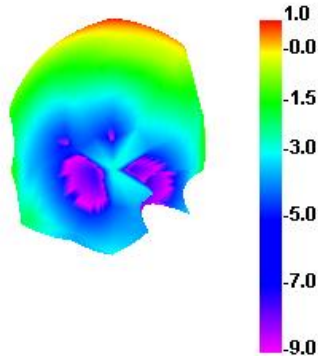


## ◆ Gain & Efficiency

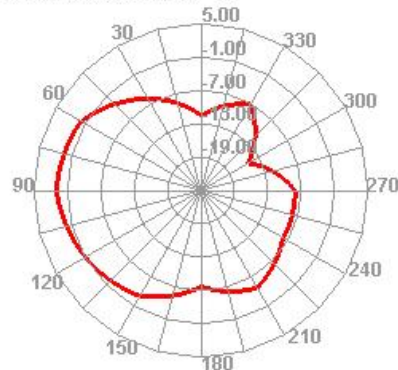
Freq (MHz)	Effi (%)	Gain (dBi)
2400	30.55	0.97
2410	30.92	1.11
2420	30.95	1.21
2430	30.17	1.14
2440	28.51	0.94
2450	25.77	0.57
2460	25.22	0.55
2470	24.93	0.56
2480	25.45	0.7
2490	25.91	0.83
2500	24.42	0.66

## ◆ Radiation Pattern

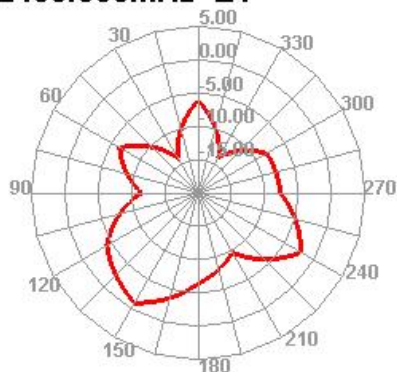
**2400.000MHz**



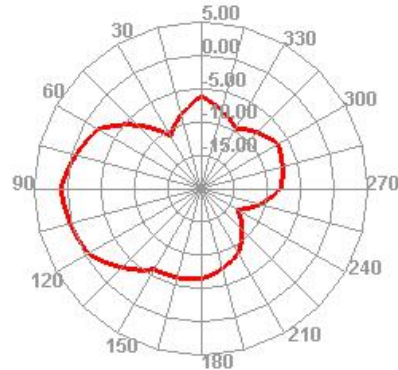
**2400.000MHz H**



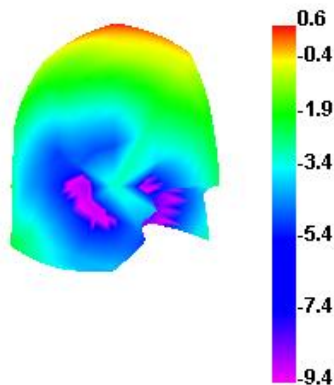
**2400.000MHz E1**



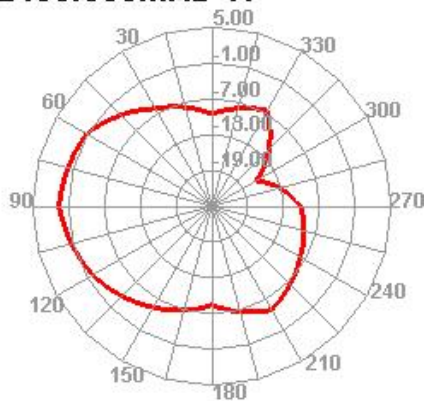
**2400.000MHz E2**



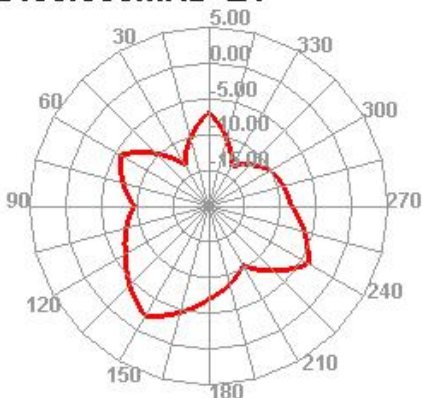
**2450.000MHz**



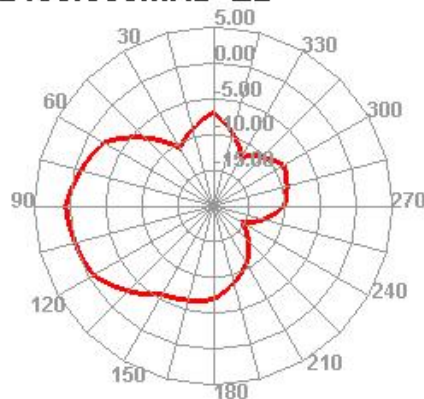
**2450.000MHz H**



**2450.000MHz E1**

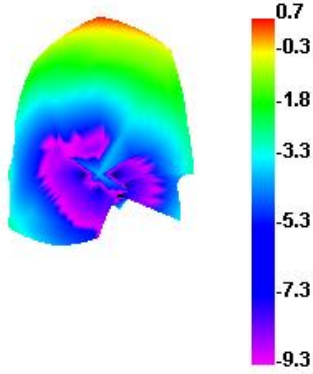


**2450.000MHz E2**

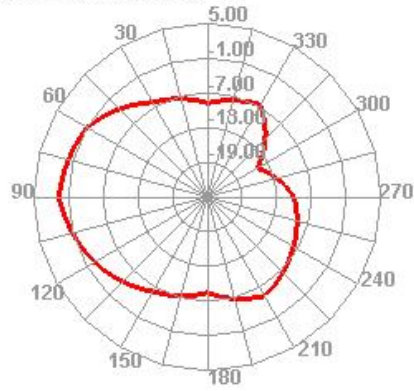




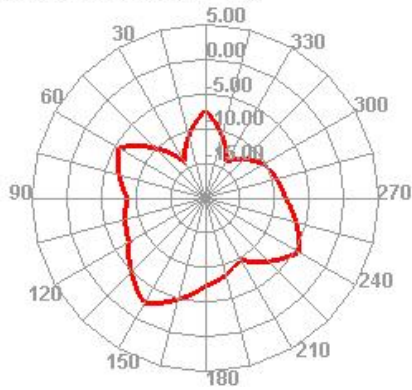
**2500.000MHz**



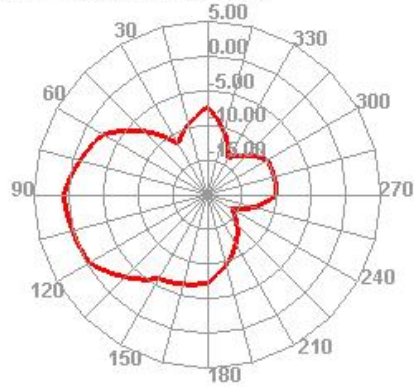
**2500.000MHz H**



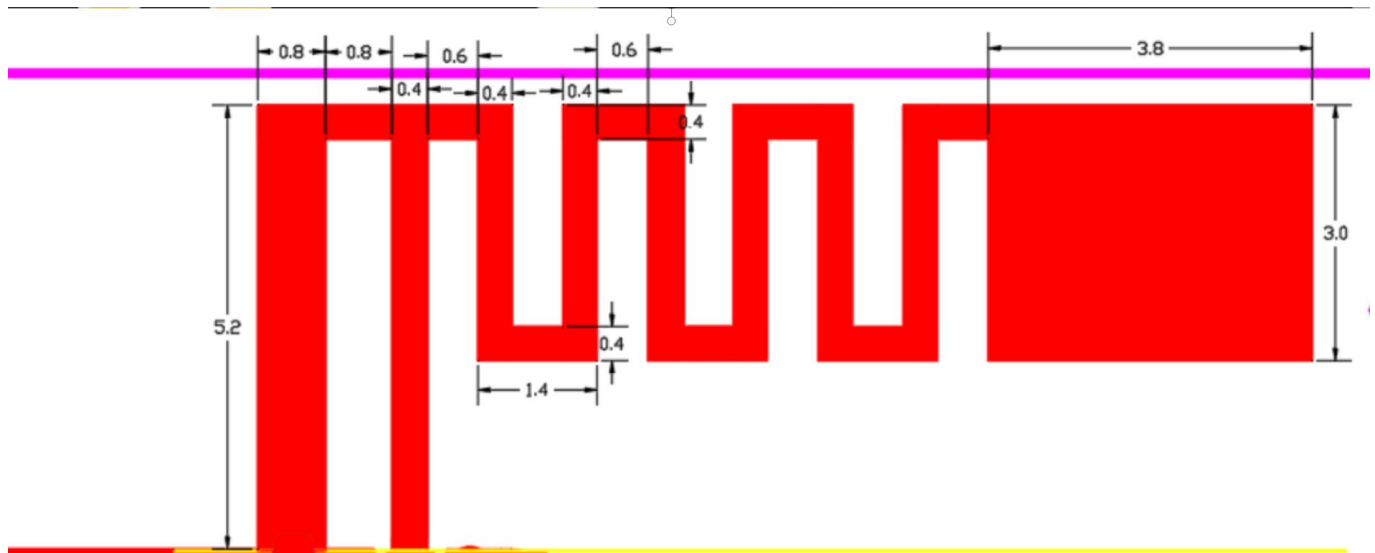
**2500.000MHz E1**



**2500.000MHz E2**



## ◆ Antenna Picture



Unit: mm

## ◆ Reliability Test

Test Item	Test condition	Equipment	Specification	Result
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1	Low Temp. Storage Test	<p>Temperature: -30℃, Time:48hrs</p> <p>Test condition: Placing antenna in a Low/High Temperature Chamber, keep the temp is 25℃ and humidity is 65% for one hour, then step-down the temp. to -30℃ in one hour, store antenna for 44 hours; step-up temp to 25℃,test antenna after 2 hours.</p>	Temp.&Humi. Tester	<p>No material deformation is allowed.</p> <p>Electronic Performance is ok .</p>	PASS
2	High Temp./High Humid Storage Test	<p>Temperature: 85℃ Humidity: 85% RH Time:48hrs</p> <p>Test condition: Placing antenna in a Low/High Temperature Chamber, keep the temp is 25℃ and humidity is 65% for one hour, then step-up the temp. to 80℃ and the humidity up to 85% in one hour, store antenna for 44 hours; step-down temp to 25℃,test antenna after 2 hours.</p>	Temp.&Humi. Tester	<p>No material deformation is allowed.</p> <p>Electronic Performance is ok .</p>	PASS
3	Salt-Spray 6 pray Test	<p>Placing antenna in the Salt-Spray Tester ,set the test condition , Temp: <math>35 \pm 2^{\circ}\text{C}</math> Humidity: 85% NaCl salt spray :5 <math>\pm 1</math> %.PH value :6.5~7.2 Test time:24hours</p>	Salt-Spray Tester	<p>No color change</p> <p>No appear rusting</p>	PASS