

Shenzhen SKYLink Technology Co.,Ltd

Antenna Specification for Approval

Customer Name: _____

Product Name: _____ 2.4G WIFI Antenna _____

Part NO. : _____ WF99A. C113. 121B. 122600. 111 _____

Write By: _____ Damon Cui _____

Issued Date: _____ 2025.03.03 _____

Customer

R&D Dept	Business Dept	Approved By

SKYLink

R&D Dept	Engineer Dept	Approval

● Specification Summary

A. Electrical Characteristics	
Frequency	2400MHz ~2500MHz
VSWR	< 2.0 dbi
Efficiency	>50%
Peak Gain	2.9 dbi
Impedance	50 Ohm
Polarization	Line
B. Material & Mechanical Characteristics	
Material of Radiator	Cu
Cable Type	1.13MM
Connector Type	/
Dimension	At Attachment
Heat-durability	280±5°C, 10sec.
C. Environmental Characteristics	
Operation Temperature	- 20 °C ~ + 80 °C
Storage Temperature	- 30 °C ~ + 85 °C

● Test Equipment & Conditions

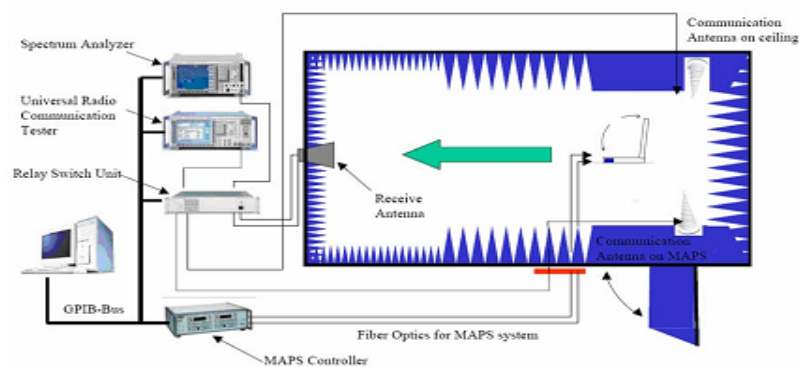
1. Network Analyzers :

Agilent 8753D 5071B

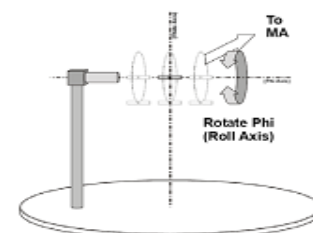
Communications Test Set:

Agilent E5515C CMW500

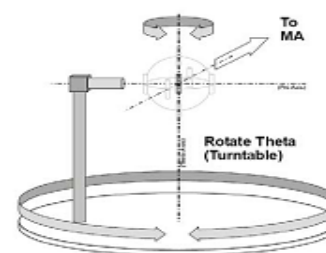
2. 3D Chamber Test System



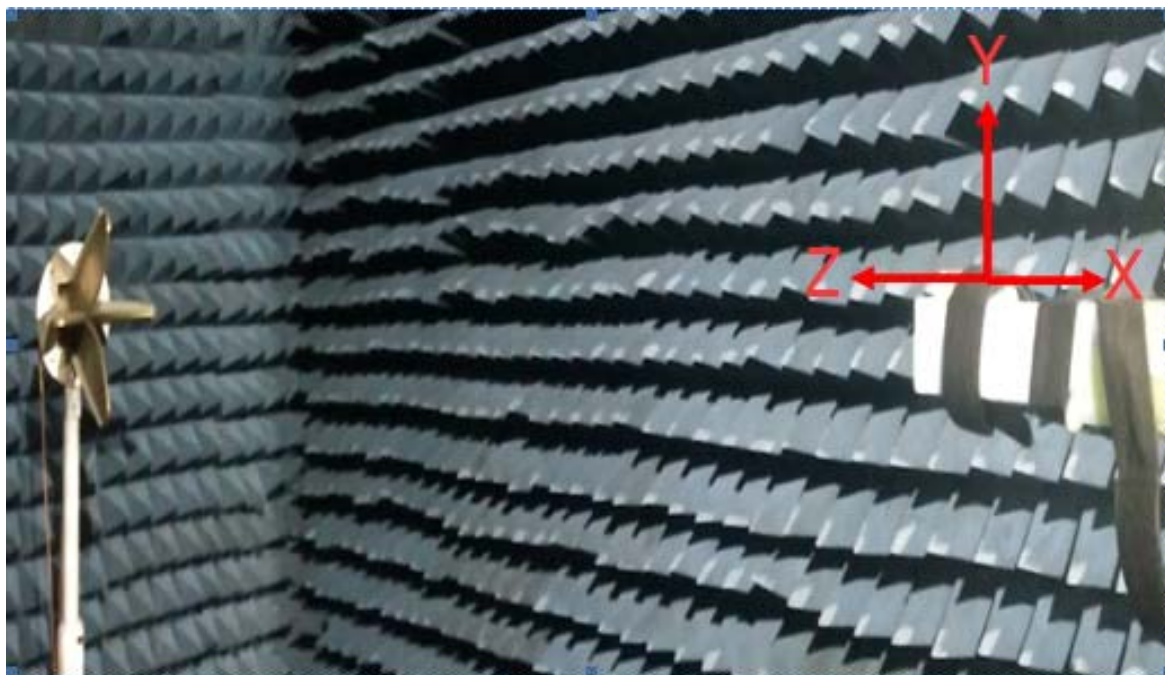
(Testing by 3D anechoic chamber)

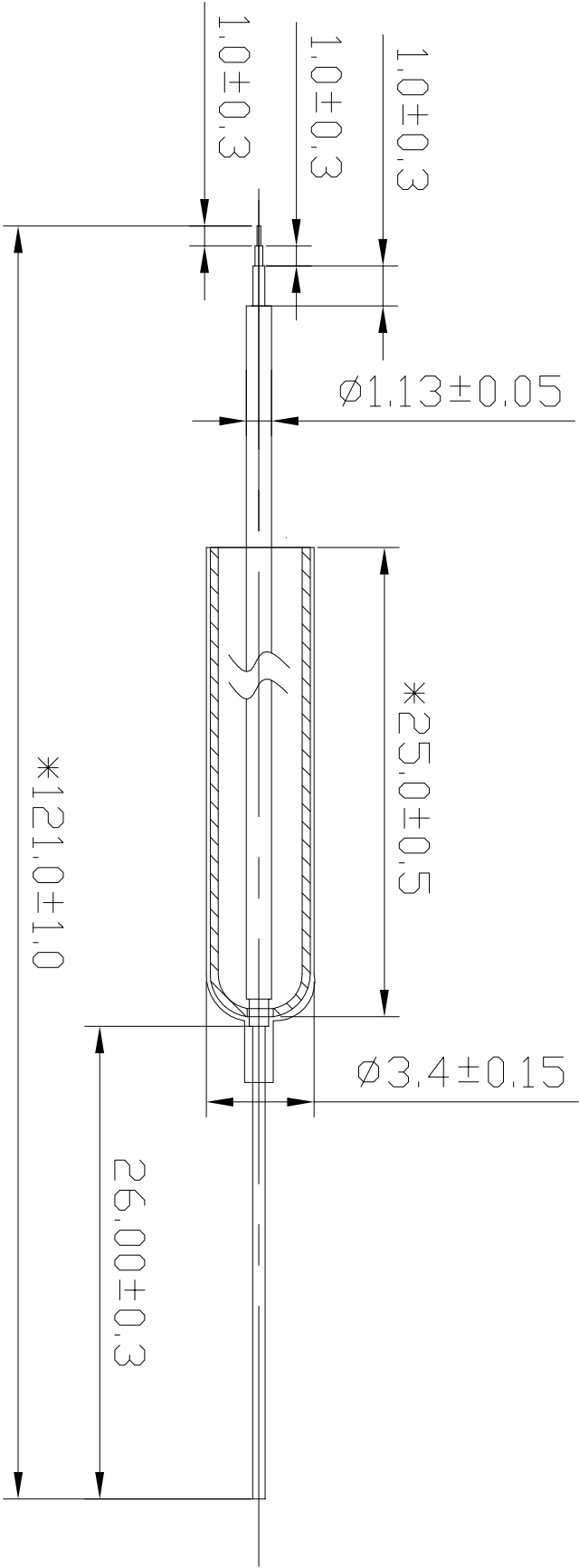
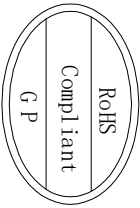


Phi axis test



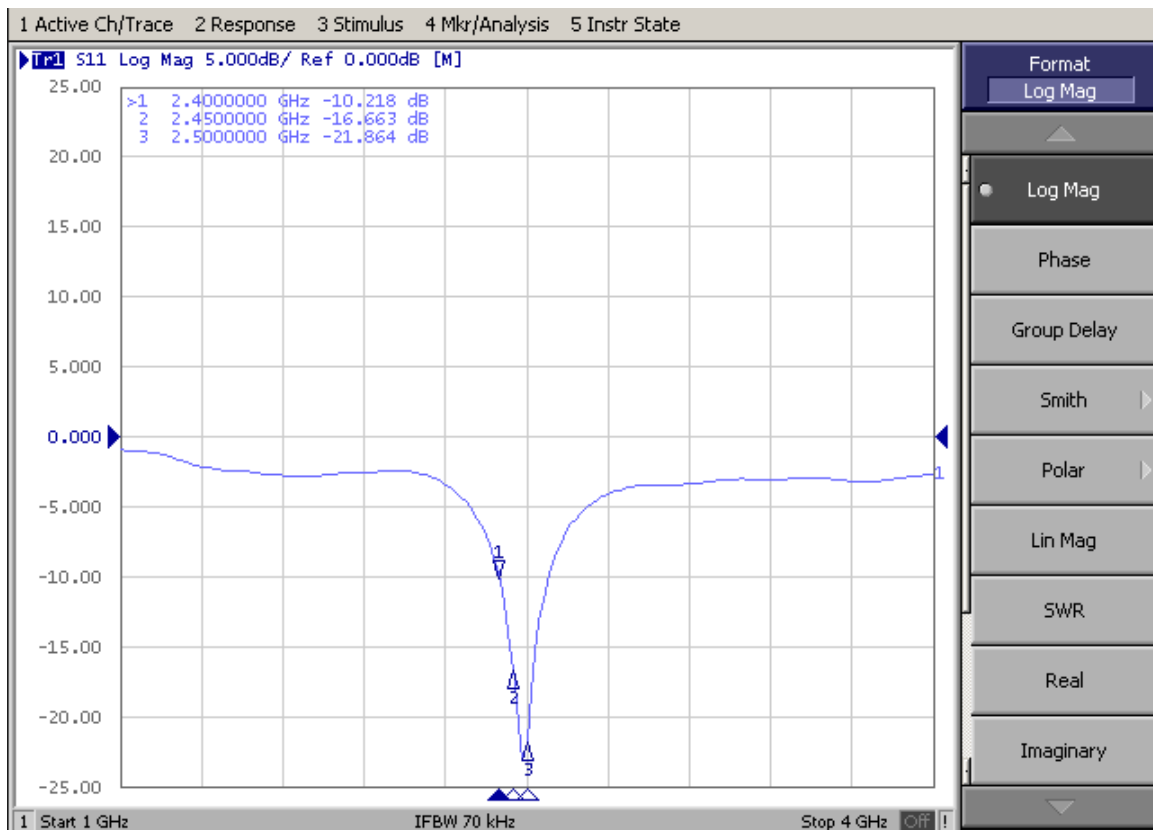
Theta axis test



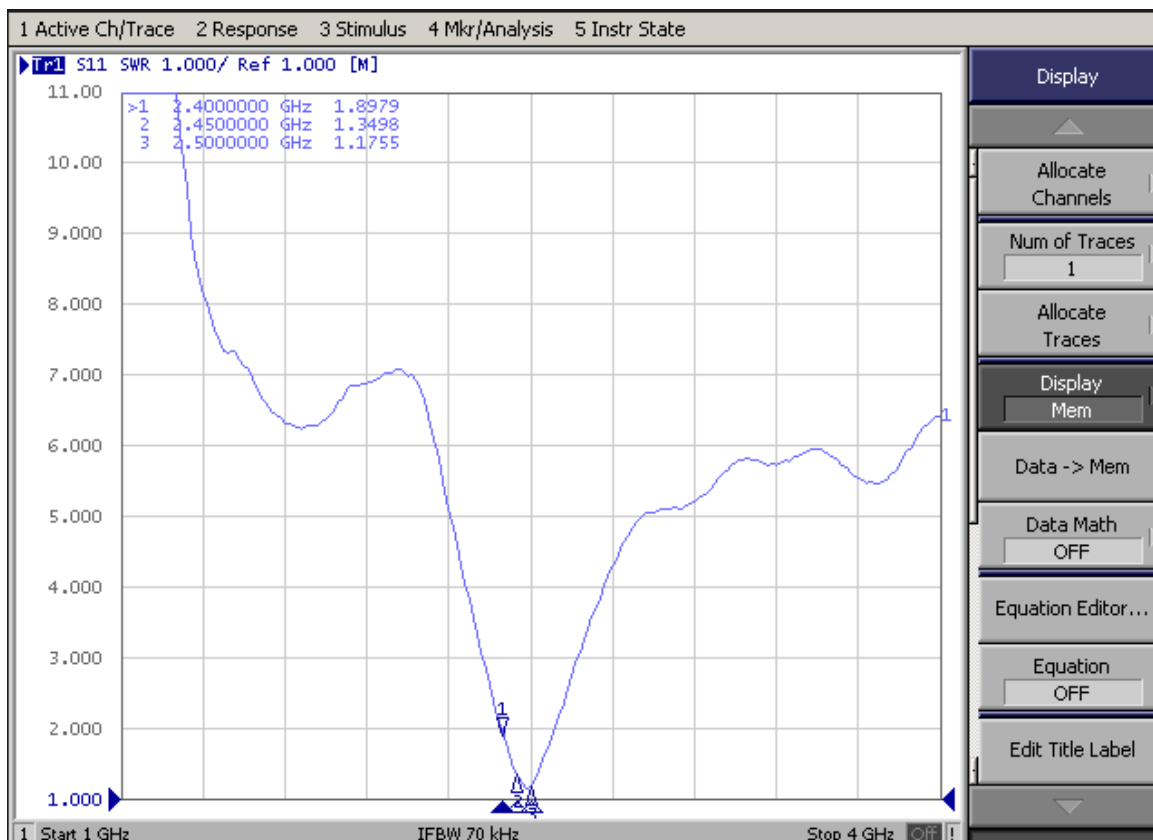


D		SHEN ZHEN SKYLINK CO., LTD									
		Third Angle	Project	Date			2025-03-03				
		0~10 ±0.05	○	0.02	Part Name			Designed by			
		10~18 ±0.10	◎	Ø.03	Part No.WF99A.C113.121B.122600.111			MD			
A	New drawing	18~30 ±0.12	⊥	0.02	Material			Checked by			
		30~40 ±0.15	∠	0.04	DWG No.			RF			
		40~ ±0.20	Angle	±0.5°	Approved by						
Rev	Description		Date	Remark		Unit	mm	Scale	1:1	Rev	A
1											

◆ Return Loss



◆ VSWR

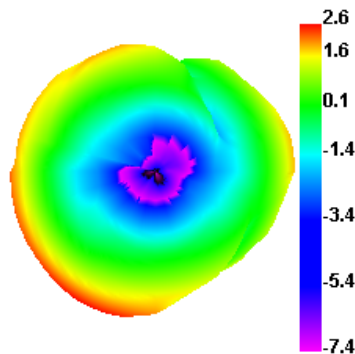


◆ Gain & Efficiency

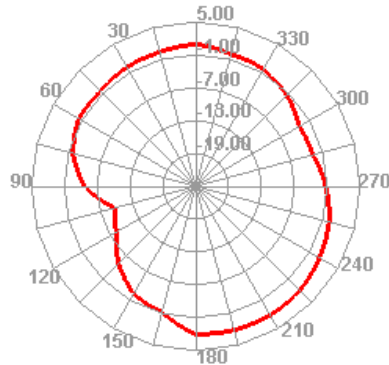
Freq (MHz)	Effi (%)	Gain (dBi)
2400	56.84	2.58
2410	61.81	2.95
2420	66.18	2.79
2430	68.23	2.68
2440	65.46	2.85
2450	62.07	2.77
2460	62.89	2.79
2470	65.97	2.84
2480	67.27	2.8
2490	65.65	2.61
2500	65.73	2.99

◆ Radiation Pattern

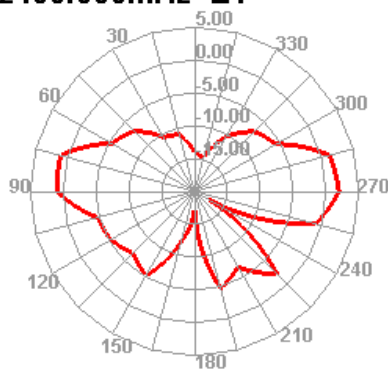
2400.000MHz



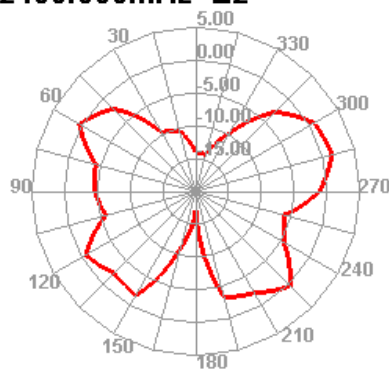
2400.000MHz H



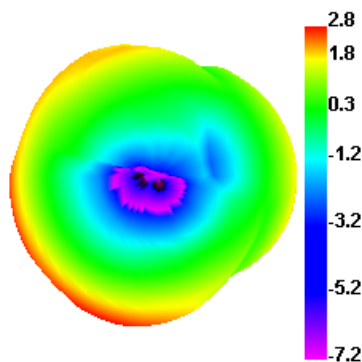
2400.000MHz E1



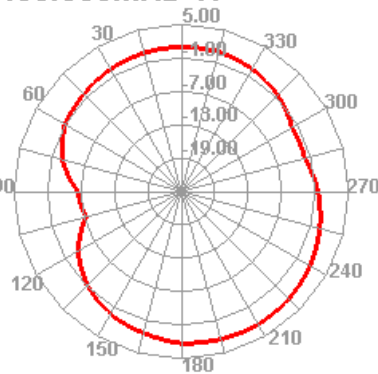
2400.000MHz E2



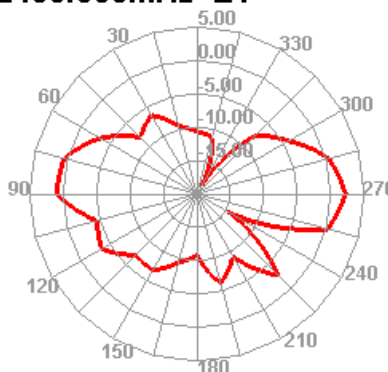
2450.000MHz



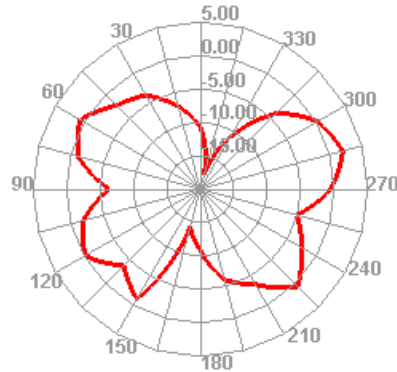
2450.000MHz H



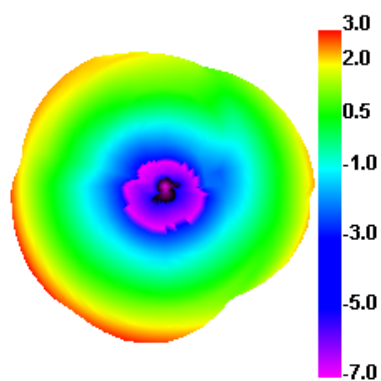
2450.000MHz E1



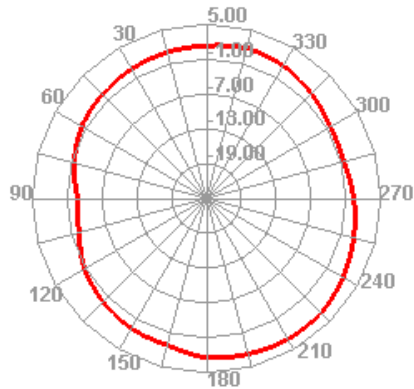
2450.000MHz E2



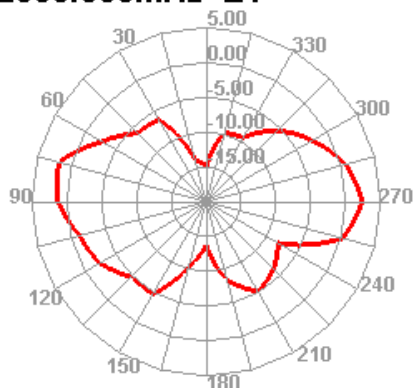
2500.000MHz



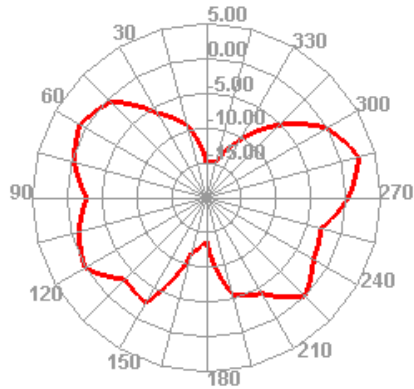
2500.000MHz H



2500.000MHz E1



2500.000MHz E2



◆ Antenna Picture



◆ Reliability Test

Test Item		Test condition	Equipment	Specification	Result
1	Low Temp. Storage Test	Temperature: -30℃, Time:48hrs 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.	Temp.&Humi. Tester	No material deformation is allowed. Electronic Performance is ok .	PASS
2	High Temp./High Humid Storage Test	Temperature: 85℃ Humidity: 85% RH Time:48hrs 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.	Temp.&Humi. Tester	No material deformation is allowed. Electronic Performance is ok .	PASS
3	Salt-Spray 6 pray Test	Placing antenna in the Salt-Spray Tester ,set the test condition , Temp: $35 \pm 2^{\circ}\text{C}$ Humidity: 85% NaCl salt spray :$5 \pm 1\%$.PH value :6.5~7.2 Test time:24hours	Salt-Spray Tester	No color change No appear rusting	PASS