

Shenzhen SKYLink Technology Co.,Ltd

Antenna Specification for Approval

Customer Name: _____

Product Name: _____ 2.4G WIFI Antenna

Part NO.: _____ G01.SM.WIFI.C113.75B.1

Write By: _____ YAN PEI HAI

Issued Date: _____ 2024-08-29

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
Efficiency	>45%
Peak Gain	1.6dbi
Impedance	50 Ohm
Polarization	Line
B. Material & Mechanical Characteristics	
Material of Radiator	Cu
Cable Type	1.13mm
Connector Type	I
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

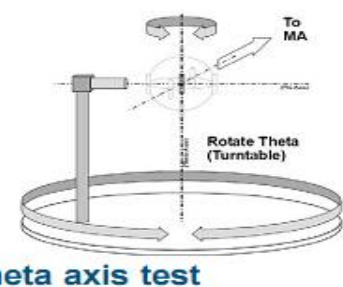
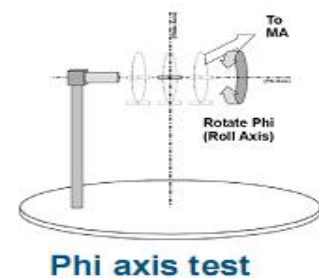
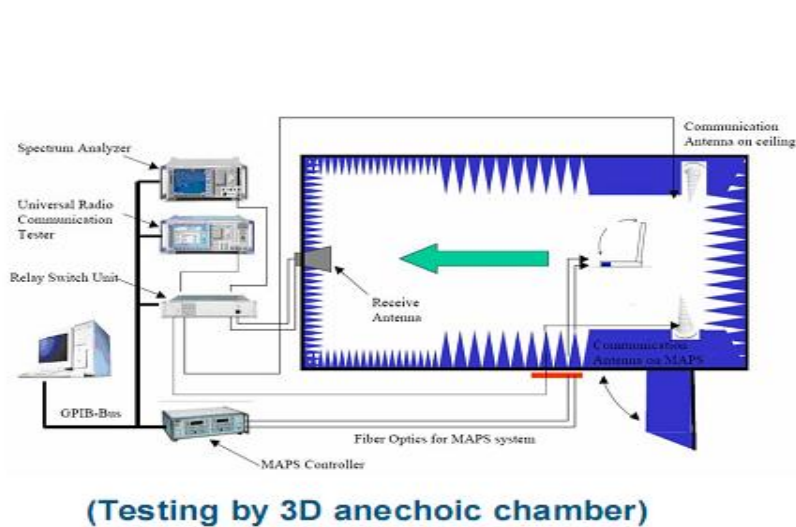
1. Network Analyzers :

Agilent 8753D 5071B

Communications Test Set:

Agilent E5515C CMW500

2. 3D Chamber Test System



1

2

3

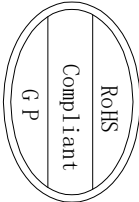
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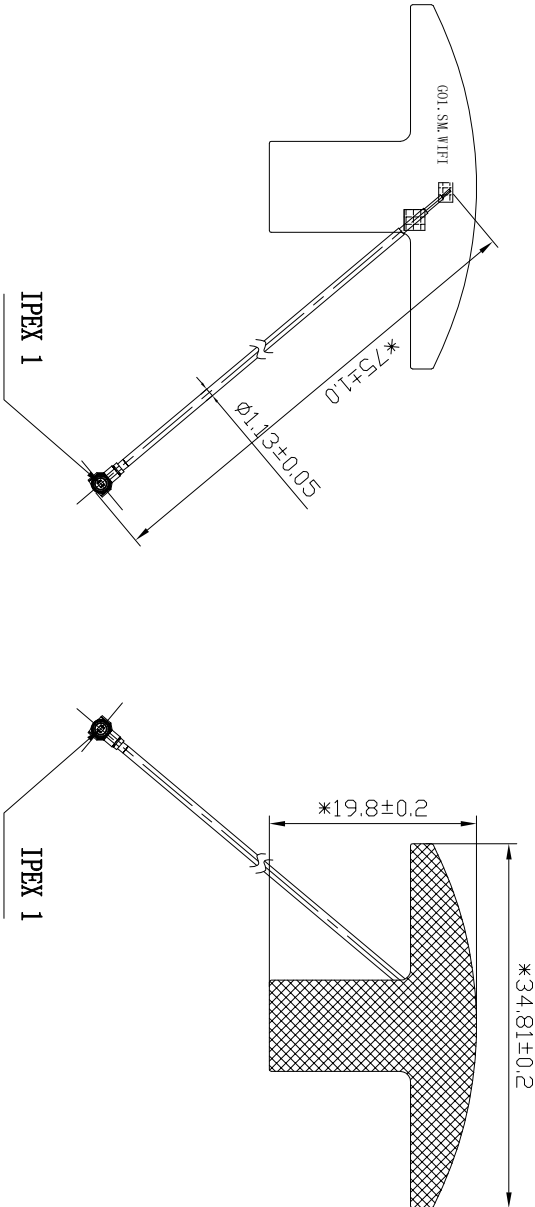
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8



A

A



B

B

C

C

D

D

SHEN ZHEN SKYlink CO., LTD									
						Third Angle		Project	
				0~10		± 0.05		○ 0.02	
				10~18		± 0.10		◎ $\phi 0.03$	
				18~30		± 0.12		⊥ 0.02	
				30~40		± 0.15		▽ 0.04	
				40~		± 0.20		Angle $\pm 0.5^{\circ}$	
				Location				DWG No.	
				5		6		7	
								Date	
								2024.05.29	
								Designed by	
								MD	
								Checked by	
								RF	
								Approved by	
								Unit	
								mm	
								Scale 1:1	
								Rev A	

Rev	Description		Date	Remark
A	New drawing			

1

2

3

4

5

6

7

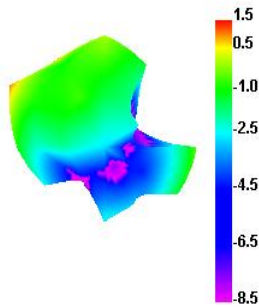
8

◆ Gain & Efficiency

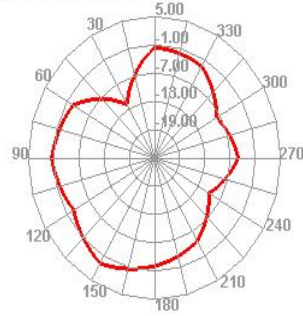
Fre (MHz)	Ef(%) (dB)	Gain(dB)
2400	45.62	1.51
2410	45.68	1.35
2420	46.32	1.54
2430	46.55	1.5
2440	47.82	1.32
2450	46.38	0.98
2460	48.55	1.08
2470	48.31	1.3
2480	49.22	1.37
2490	48.71	1.63
2500	48.19	1.65

◆ Directional pattern

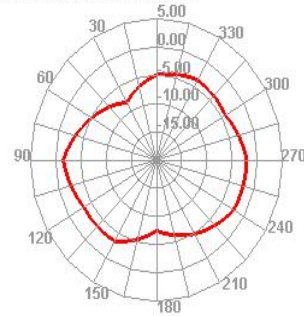
2400.000MHz



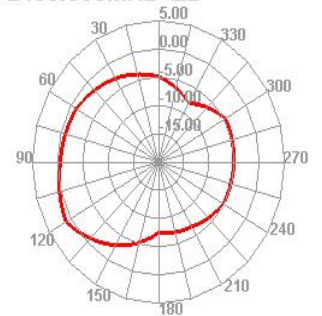
2400.000MHz H



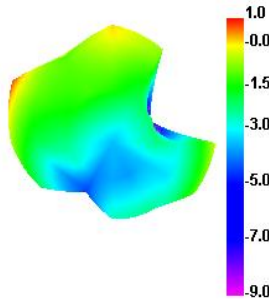
2400.000MHz E1



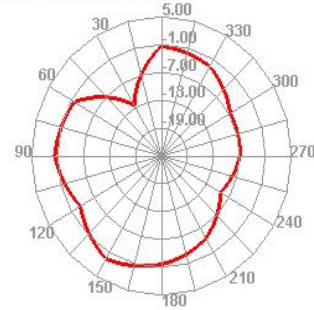
2400.000MHz E2



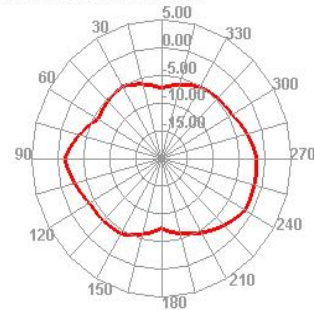
2450.000MHz



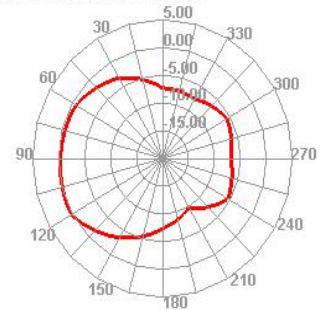
2450.000MHz H



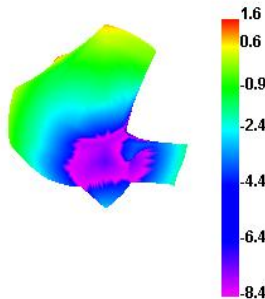
2450.000MHz E1



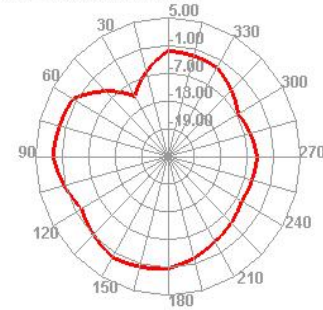
2450.000MHz E2



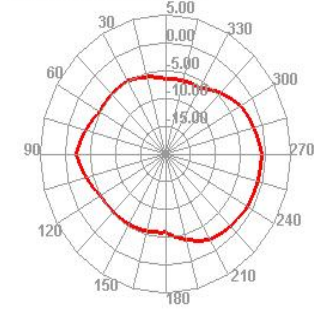
2500.000MHz



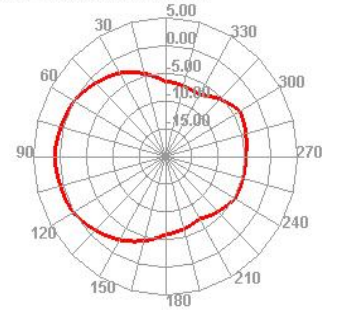
2500.000MHz H



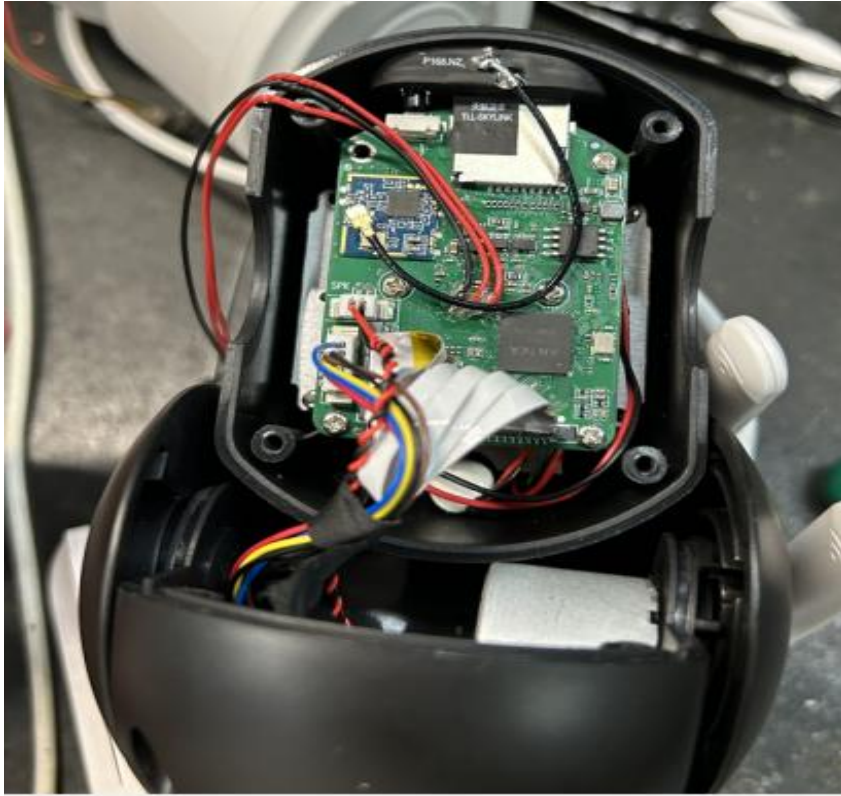
2500.000MHz E1



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