

# Shenzhen SKYLink Technology Co.,Ltd

## Antenna Specification for Approval

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

Product Name: \_\_\_\_\_ D5810 WIFI antenna \_\_\_\_\_

Part NO. : \_\_\_\_\_ TY03 \_\_\_\_\_

Write By: \_\_\_\_\_ YAN PEI HAI \_\_\_\_\_

Issued Date: \_\_\_\_\_ 2023-03-15 \_\_\_\_\_

### 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	>40%
Peak Gain	2.46dbi
Impedance	50 Ohm
Polarization	Line
B. Material & Mechanical Characteristics	
Material of Radiator	NA
Cable Type	NA
Connector Type	NA
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

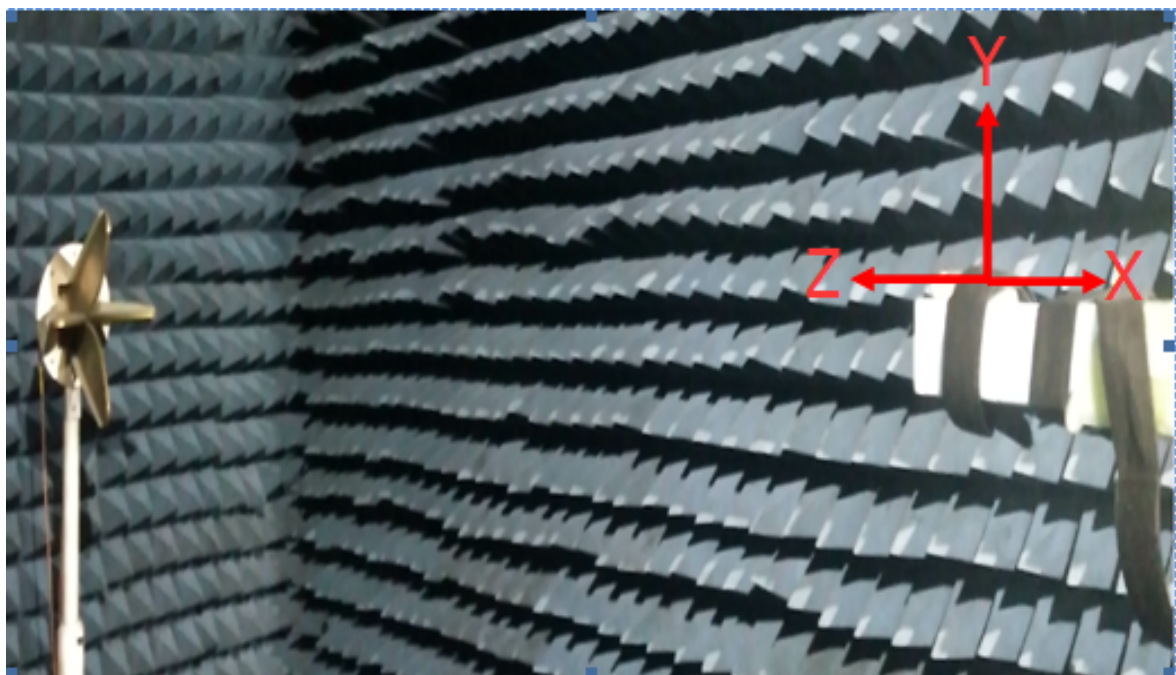
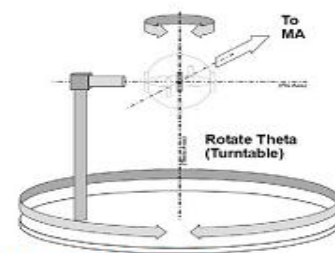
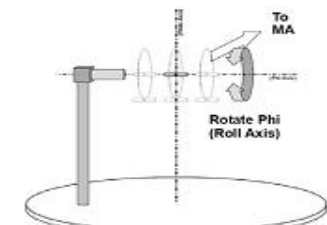
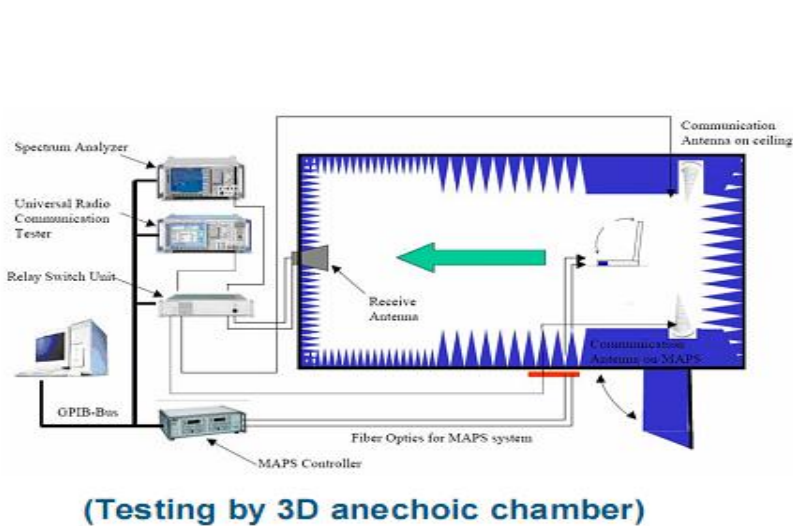
### 1. Network Analyzers :

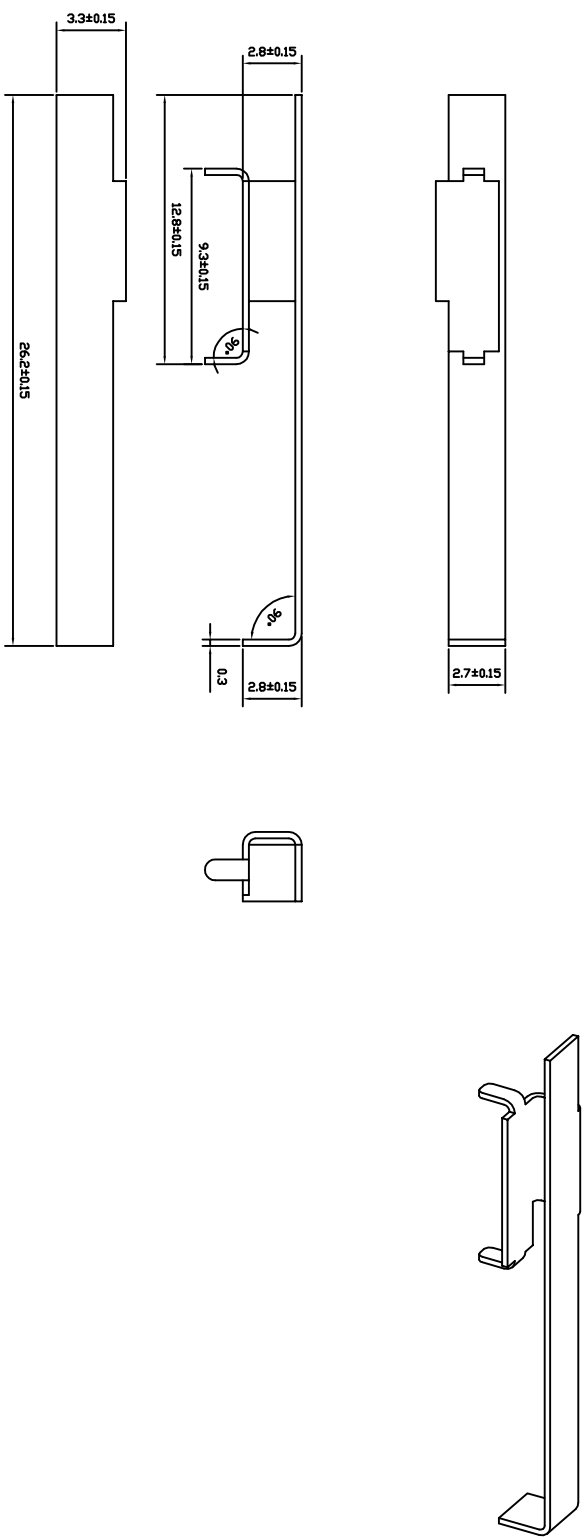
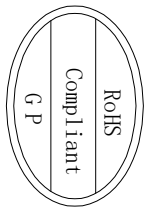
Agilent 8753D 5071B

### Communications Test Set:

Agilent E5515C CMW500

### 2. 3D Chamber Test System



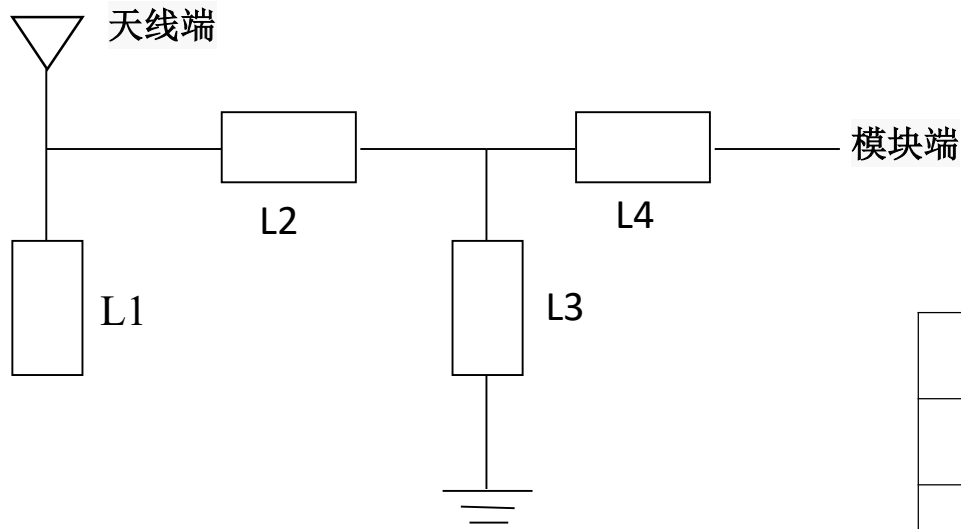


Rev	1	Description	Date	Remark
A		New drawing		

深 圳 天 联 凌 科 技 有 限 公 司 SHEN ZHEN SKYLINK CO., LTD		Project	Date	2021-07-20
0~10	±0.05	Third Angle	Part Name	
10~18	±0.10	○	Part No.	TY03
18~30	±0.12	◎	Material	
30~40	±0.15	⊥	DWG No.	
40~	±0.20	∠	Approved by	
		±0.5°	Unit	mm
			Scale	1:1
			Rev	A

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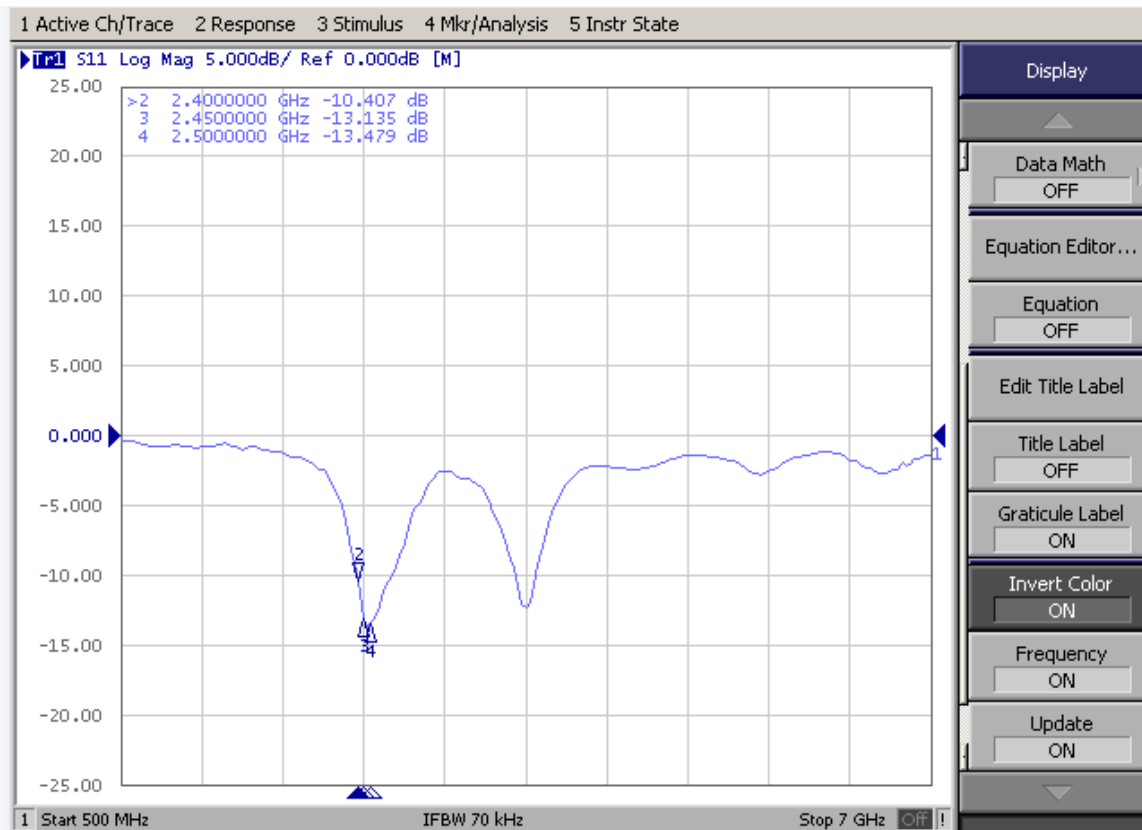
□ 匹配电路 (matching circuit)



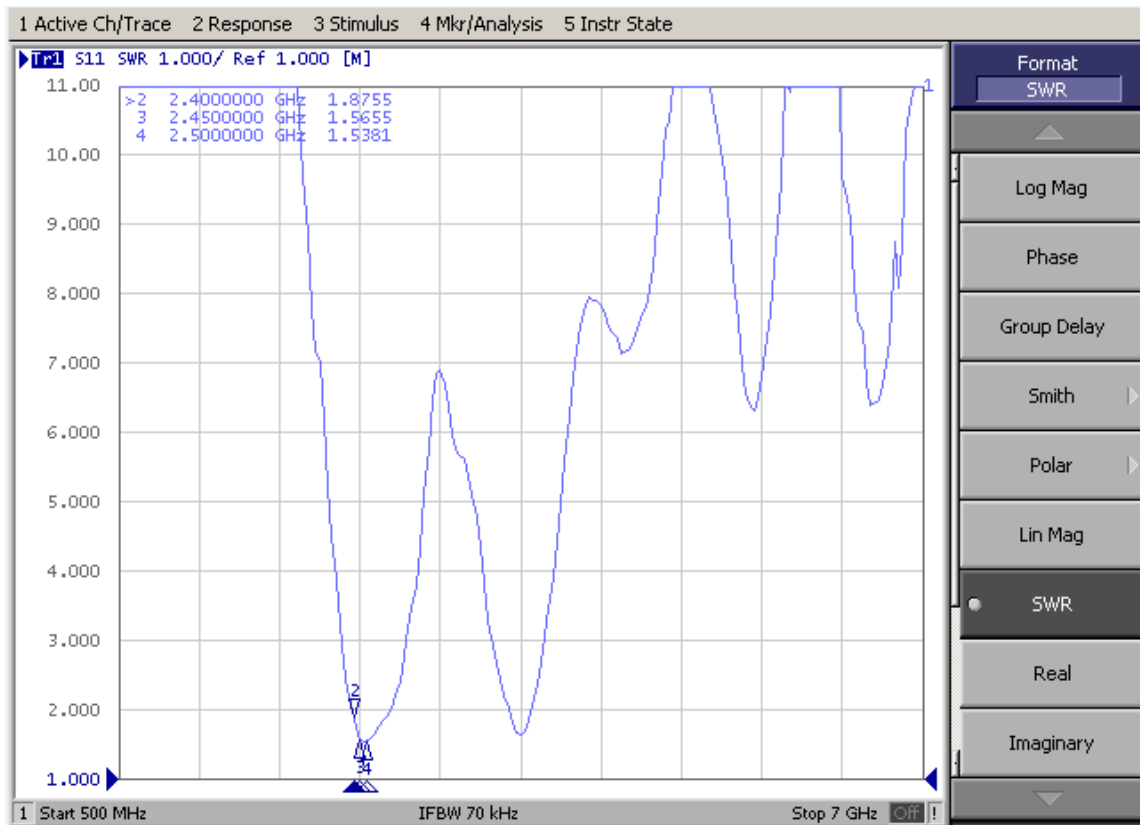
L1	1.2PF
L2	3.9NH
L3	/
L4	0欧

Note: This is the current antenna matching, which may change after receiving the final machine. Please be aware.

## Return Loss



## VSWR

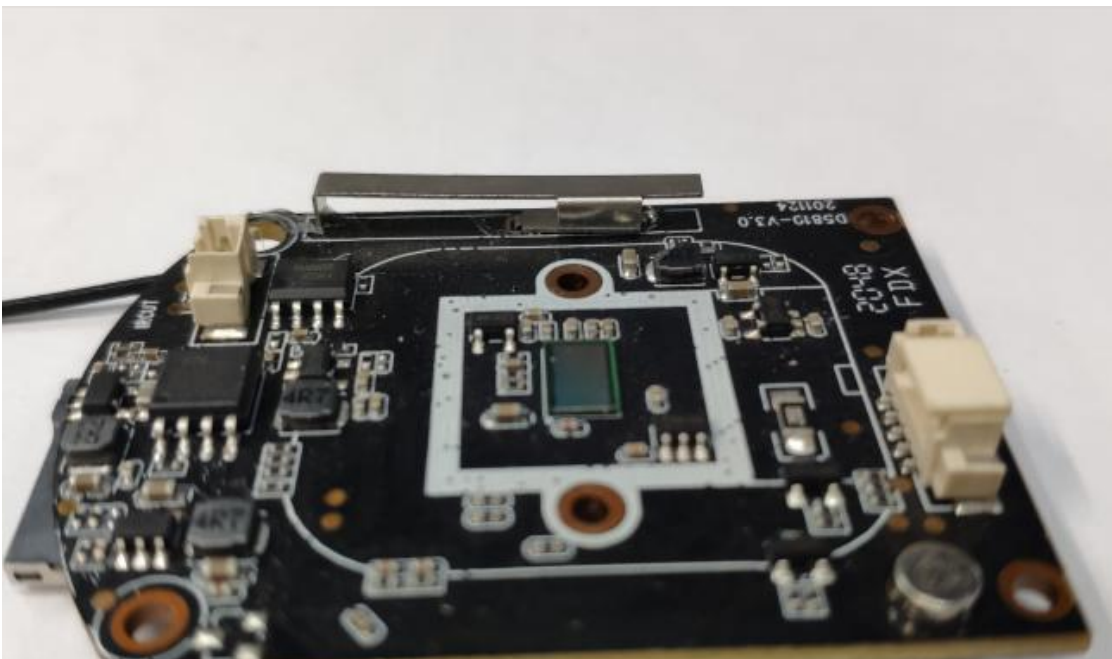
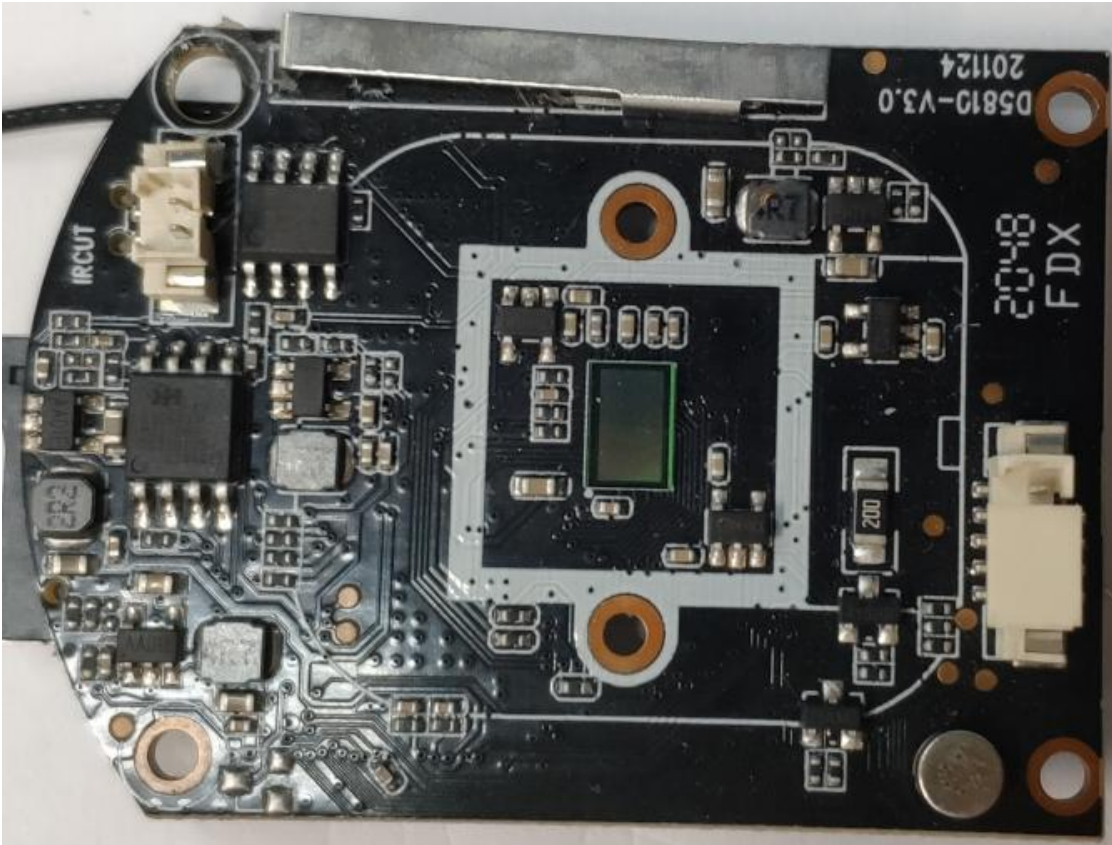


## □ Gain & Efficiency

Freq (MHz)	Effi (%)	Gain (dBi)
2400	42.66	1.42
2410	42.21	1.48
2420	42.06	1.54
2430	42.75	1.75
2440	44	1.86
2450	45.4	2.05
2460	46.25	2.26
2470	46.39	2.46
2480	47.23	2.36
2490	48.99	2.21
2500	49.95	2.12

□ Line assembly mode

The antenna is attached to the motherboard by SMT.



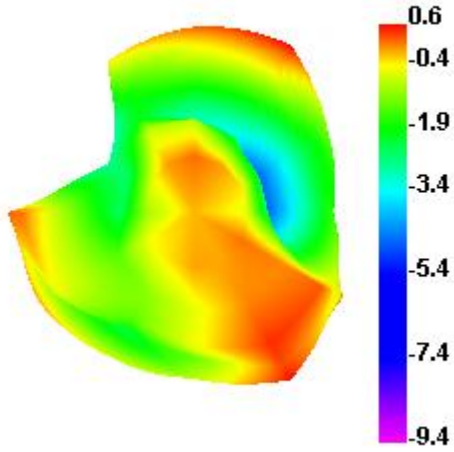


## □ Reliability Test

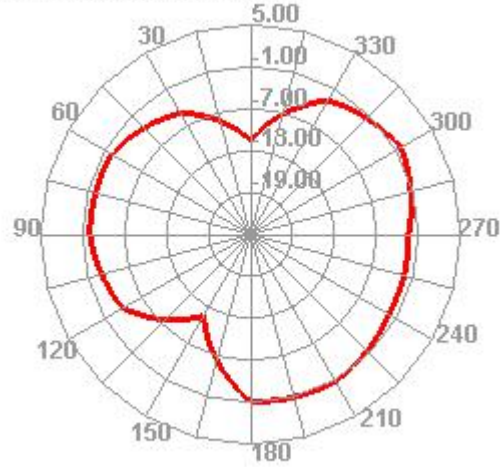
Test Item	Test condition	Equipment	Specification	Result
1 Low Temp. Storage Test	<p>Temperature: -30℃, Time:48hrs</p> <p>Test condition: Placing antenna in a Low/High Temperature Chamber, keep the temp is 25℃ and humidity is 65% for one hour, then step-down the temp. to -30℃ in one hour, store antenna 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: 35±2℃ Humidity: 85% NaCl salt spray :5 ±1 %.PH value :6.5~7.2 Test time:24hours</p>	Salt-Spray Tester	<p>No color change</p> <p>No appear rusting</p>	PASS

## ◆ Radiation Pattern

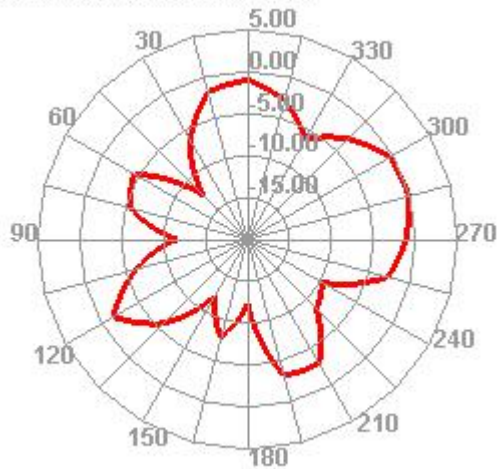
2400.000MHz



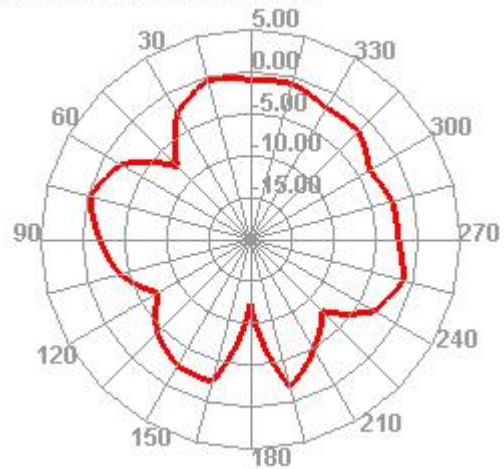
2400.000MHz H



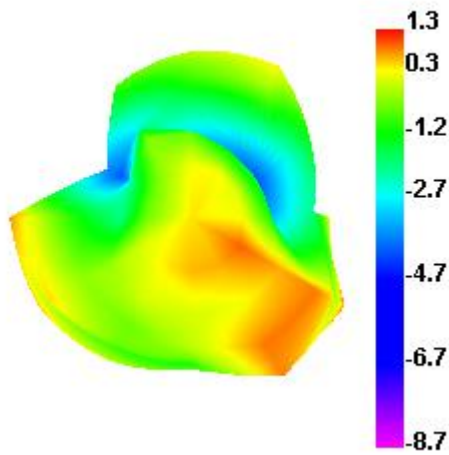
2400.000MHz E1



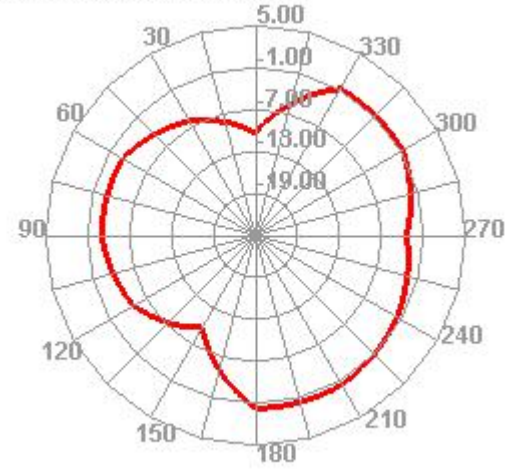
2400.000MHz E2



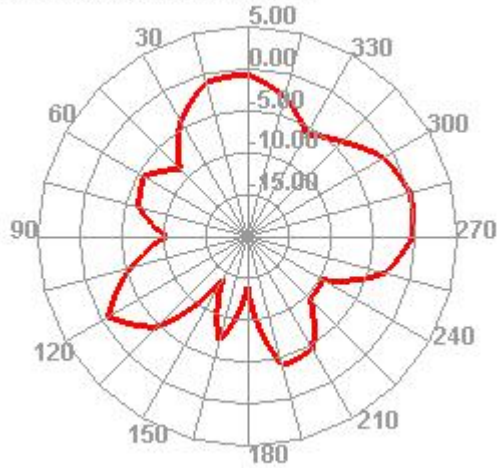
2450.000MHz



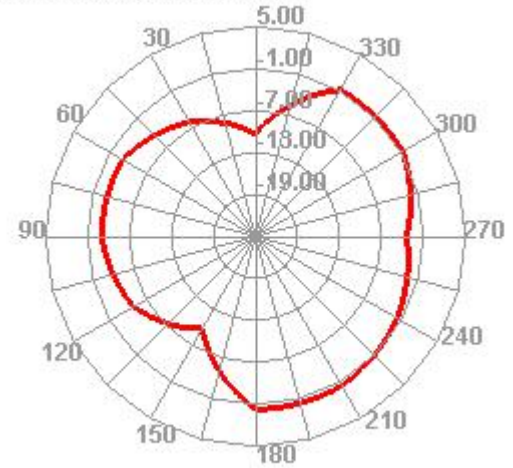
2450.000MHz H



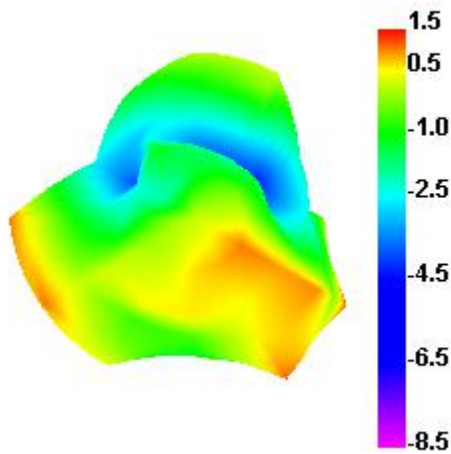
2450.000MHz E1



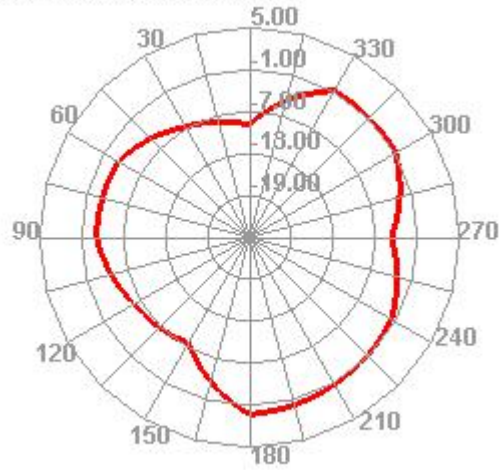
2450.000MHz H



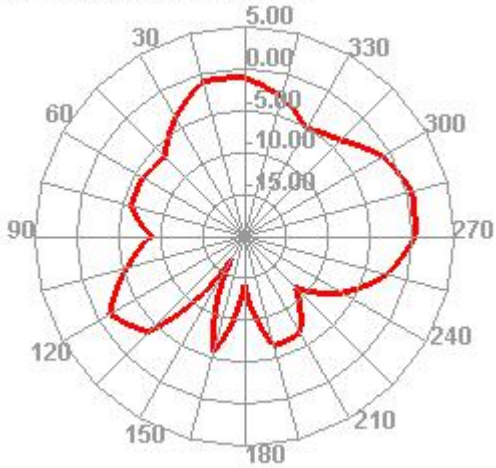
2500.000MHz



2500.000MHz H



2500.000MHz E1



2500.000MHz E2

