

承 认 书

SPECIFICATION FOR APPROVAL

客 户 名 称

CUSTOMER NAME: 海兴电力

产 品 名 称

PRODUCT NAME: 902~928MHz 3dBi 玻璃钢天线

客 户 料 号

CUSTOMER P/N: 2140103220

仁 丰 料 号

Ren Feng P/N: U00T06S000N05241 REV: B

内部结构

Internal structure: PCB

	MANUFACTURER SIGNATURE	CUSTOMER SIGNATURE
CHECKED BY:	赵文天	
AUDITOR BY:	刘 斌	
APPROVED BY:	姚定军	
DATE:	2024-10-17	

履历表 Resume

版次号 Edition No.	修改章节 Modify chapter	修改页码 Modify Page	生效日期 Effective date	文件和资料更改内容 File and data changes	更改记录 人 Change recorder
A			2024-05-17	初版发行	王小芬
B			2024-10-17	更新承认书规格	赵文天



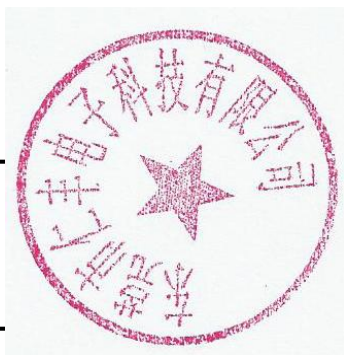
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六、-----	测试报告 Testing report

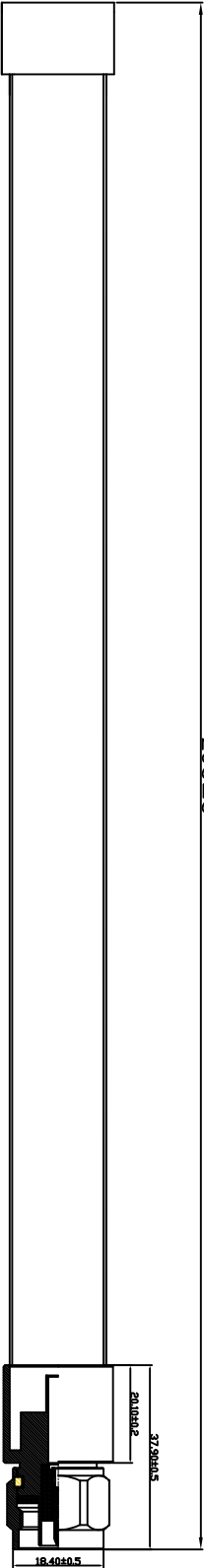
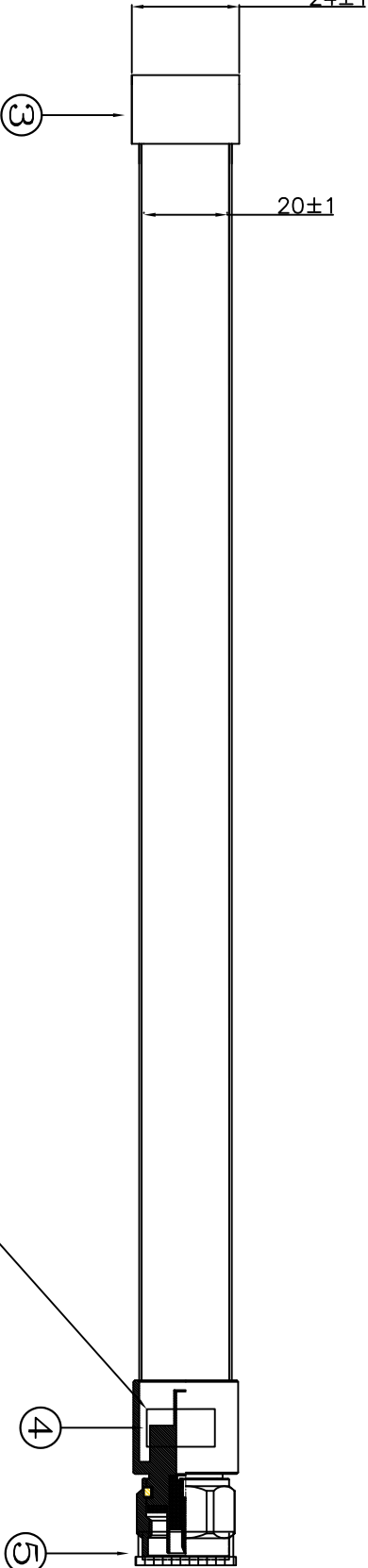


产品主要技术参数

Main technical specifications

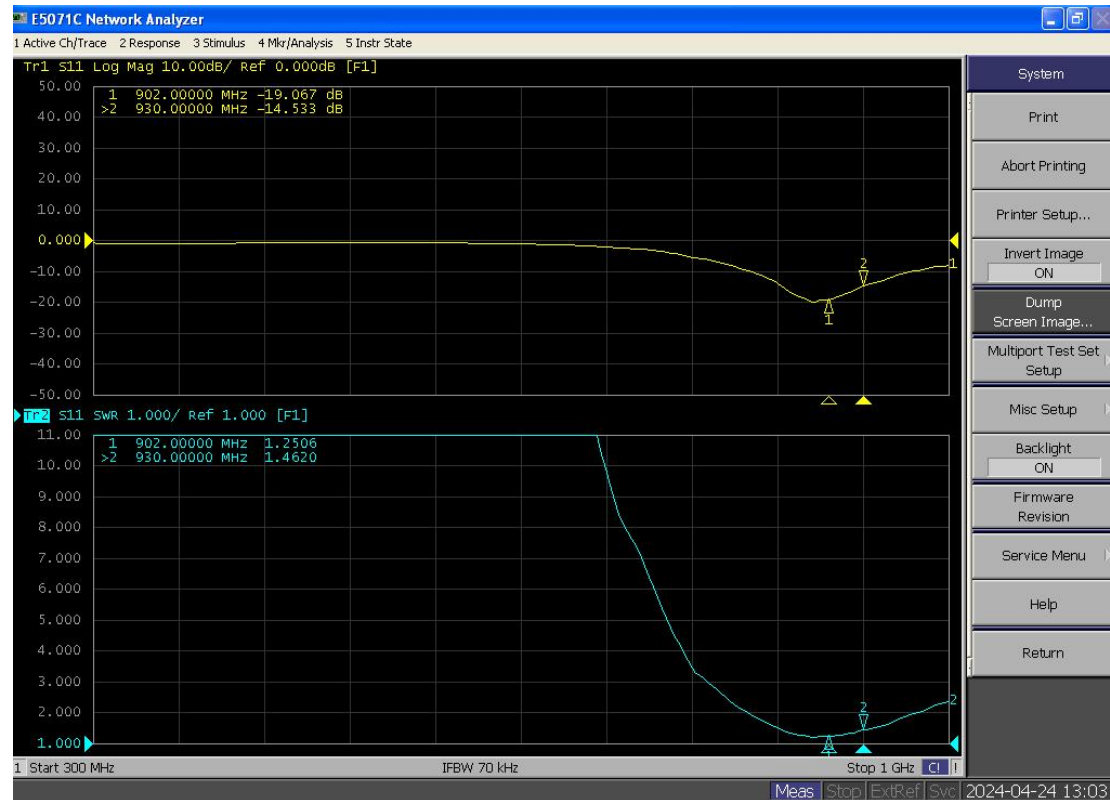
主要技术指标		Main technical specifications	
频率范围 (MHZ)	902-928	Frequency Range (MHZ)	902-928
中心频率 特性阻抗(Ω)	50	Impedance(Ω)	50
增益(dBi)	3	Gain(dBi)	3
反射损耗	≤ -10.8	Return Loss(dB)	≤ -10.8
输出电压 驻波比	≤ 1.8	VSWR	≤ 1.8
极化方式	垂直极化	Polarization	Linear, Vertical
方向性	全向性	Radiation	Omni-directional
连接方式	N 型头	Connector Type	N Head
物理性能		Physical Properties	
天线本体 材料	玻璃钢	Antenna Base	Fiberglass
工作温度	$-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$	Operating Temp	$-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$
保存温度	$-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$	Storage Temp	$-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$
防水等级	IP65 (适用与倒装&正装)	Waterproof level	IP65 (Applicable for inverted and formal attire)

REV		DATE	DESCRIPTION
A	2024-10-17		NEW ISSUE

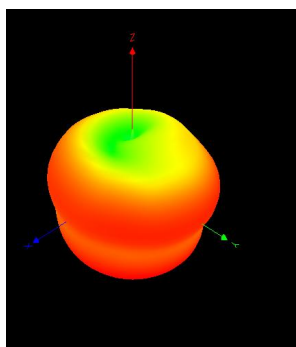
A		B	C	D	E	F	G
1		295±5					
2							
3							
4							
5							
6							
Specification:		Frequency Range : 902~928MHZ					
		dBi: 3dBi					

测试报告 Testing report

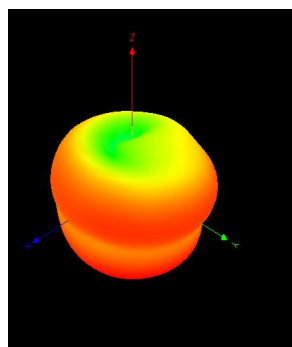
6.1 网络分析仪测试报告



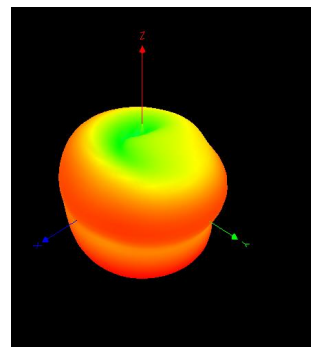
6.2 暗室 2D、3D Radiation Pattern



902MHz

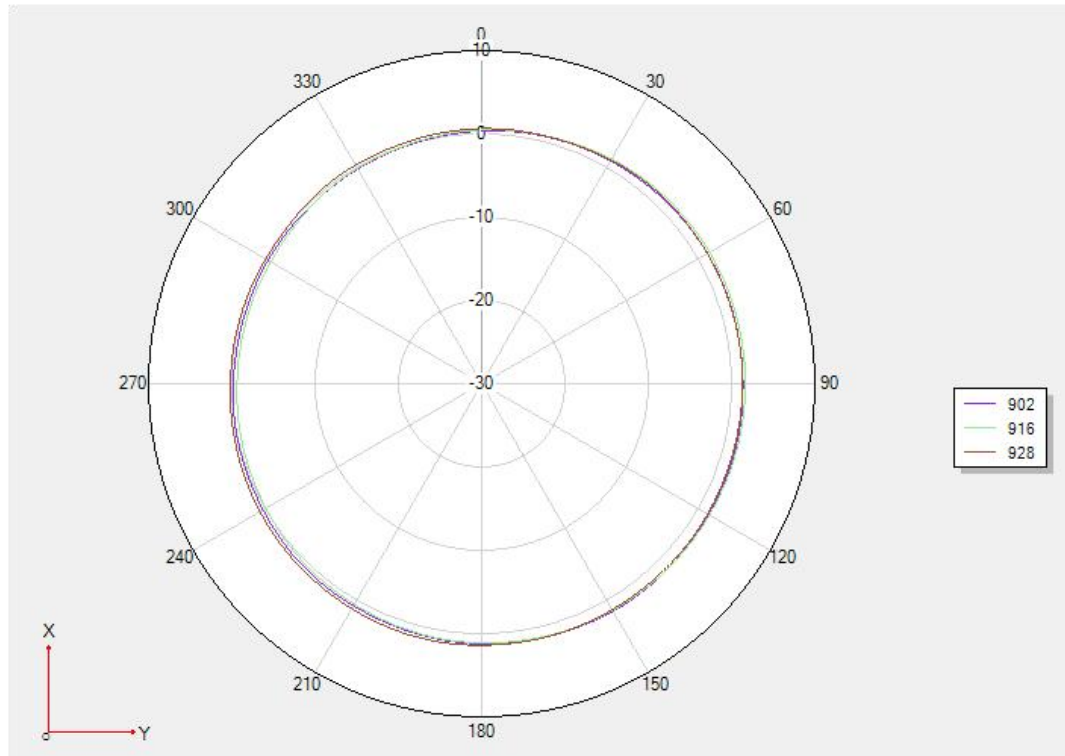


915MHz

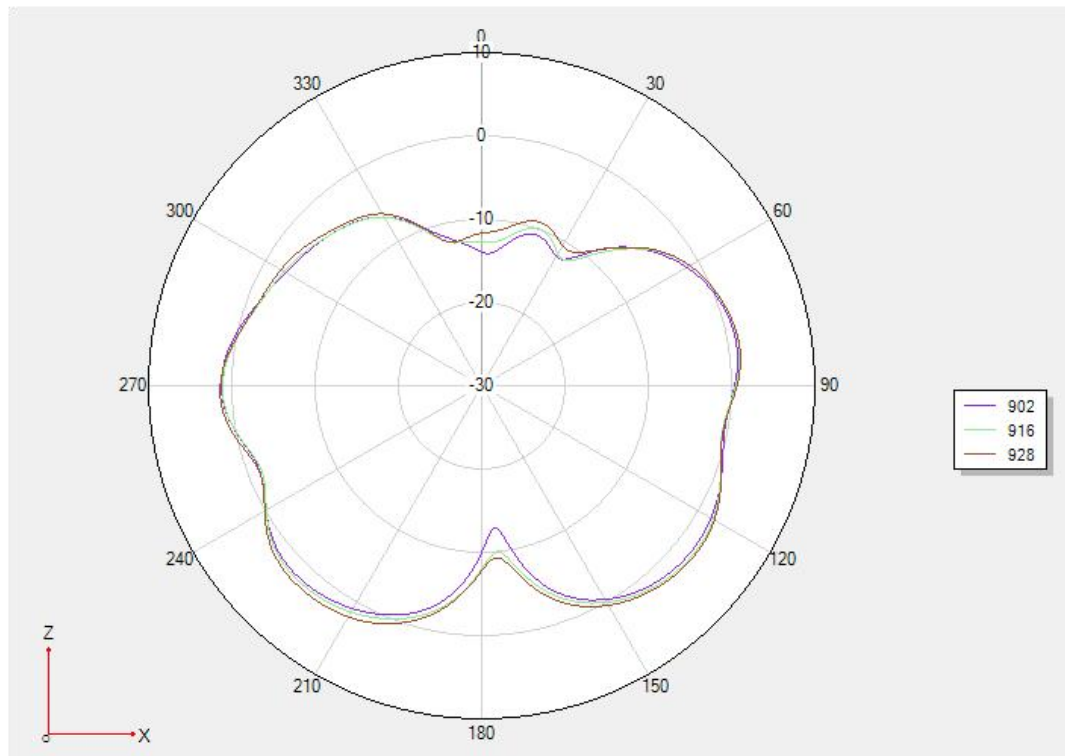


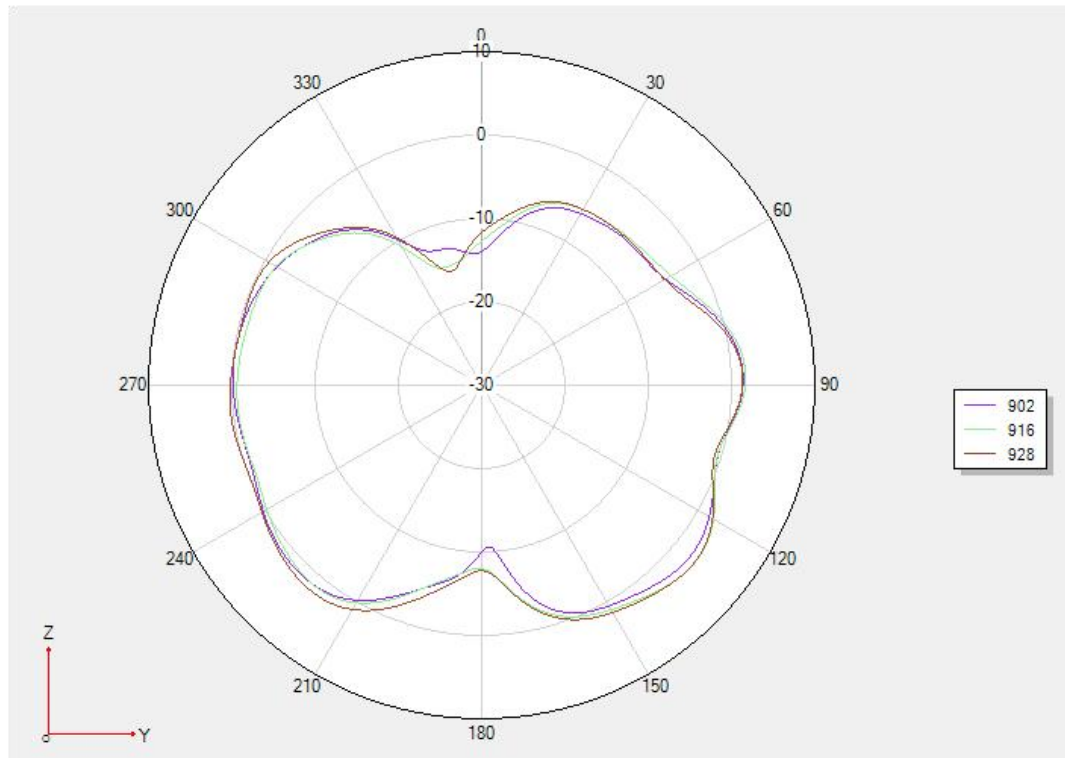
928MHz

2D-H 面



2D-E1 面





2D-E2 面

6.3 增益、效率表

Freq(MHz)	Gain(dBi)	Effi(%)
902	2.91	65.26
904	2.99	66.33
906	3.03	68.31
908	3.21	67.79
910	2.97	66.41
912	2.84	63.95
914	2.86	64.36
916	3.17	66.62
918	3.22	68.16
920	3.18	66.47
922	2.95	65.3
924	2.82	64.72
926	3.1	66.41
928	3.18	68.83

Laboratory Test Report

盐雾试验报告 (Salt fog Test Report)

厂商/客户 (Manufacturer / customer) : 海兴电力 生产日期 (Date of manufacture) : 2024/5/13

设备编号 (NO.): RF-YQ-218 测试日期 (Test date): 2024/5/13

品名 (Part Name) : 玻璃钢天线 规格 (Specifications) : 48H

料号 (Part No.) : 2140103220-U00T06S000N05241 盐雾浓度 (Salt fog concentration) : 5%

测试期间 (Testing Period) : 2024-5-13/9:35~2024-5-15/9:35

测试项目 (Test Description) :

1.外观检查 (Check the appearance of the product)

2.盐雾测试 (Salt Spray Test Report)

3.外观检查 (Check the appearance of the product)

测试方法 (Test Method) :

1.外观检查 (Check the appearance of the product)

目视无生锈或其他不良。

By visual inspection without noticeable rust.

2.盐雾测试 (Salt Spray Test Report)

试验应使用温度控制范围可达：10°C~55°C，精度度±3°C；盐溶液浓度5%之盐水喷雾试验机，室温为25°C±5°C，湿度65±5 % RH，测试时间按照作业规范进行测试

The temperature control range of the test should be as follows: 10 RH ~55, precision = 3; salt solution concentration 5 % salt spray test machine, room temperature is 25 + 5, humidity 65 + 5%, test time according to the operation specification test

3.外观检查 (Check the appearance of the product)

目视无生锈或其他不良。

By visual inspection without noticeable rust.

测试结果 (Test Results) :

1.外观检查 (Check the appearance of the product) ☒ PASS ☐ FAIL

2.盐雾测试 (Salt fog Test) ☒ PASS ☐ FAIL

3.外观检查 (Check the appearance of the product) ☒ PASS ☐ FAIL

测试项目 (Test Description) :

1.产品外观检查(Check the appearance of the product) 数量 (Quantity) : 1 PCS

Standard : See Test Method

Test Result

NO.	sample-1	sample-2	sample-3	sample-4	sample-5
Result	PASS	/	/	/	/

Conclusion : ☒ PASS ☐ FAIL

2.盐雾测试 (Salt Spray Test Report) 数量 (Quantity) : 1 PCS

Standard : See Test Method

Test Result

NO.	sample-1	sample-2	sample-3	sample-4	sample-5
Result	PASS	/	/	/	/

Conclusion : ☒ PASS ☐ FAIL

3.检验产品外观 (Check the appearance of the product) 数量 (Quantity) : 1 PCS

Standard : See Test Method

NO.	sample-1	sample-2	sample-3	sample-4	sample-5
Result	PASS	/	/	/	/

Conclusion : ☒ PASS ☐ FAIL

测试照片 (Test Photos)

:



Step1.检查产品外观 (Check the appearance of the product) .



Step 2.盐雾测试 (Salt Spray Test Report)



Step 3.检查产品外观 (Check the appearance of the product)

备注：产品实验后外观无生锈或其他不良，判合格。

~~ The End Of Test Report ~~

Approved : 汤伶俐

Checked : 廖康凤

Tester : 李姝婧

Laboratory Test Report

高低温测试报告 (High and low temperature test Report)

厂商/客户 (Manufacturer / customer) : 海兴电力

生产日期 (Date of manufacture) : 2024/5/13

设备编号 (NO.): RF-YQ-215

测试日期 (Test date): 2024/5/13

品名 (Part Name) : 玻璃钢天线

规格 (Specifications) : /

料号 (Part No.) : 2140103220-U00T06S000N05241

高温 (high temperature) : 80°C 时间 (time): 96H

湿度 (humidity) : 90%RH

低温 (low temperature) : - 40°C 时间 (time): 96H

循环 (Through the bad) : 1

测试期间 (Testing Period) : 2024-5-13/10:15~2024-5-21/10:15

测试项目 (Test Description) : 1.外观检查 (Check the appearance of the product)
2.高低温测试 (High and low temperature test)
3.外观检查 (Check the appearance of the product)
4.网络分析仪测试 (Vector Network Analyzer Test)

测试方法 (Test Method) : 1.外观检查 (Check the appearance of the product)
No distortion, discoloration, splitting, blistering and so on
目视无变形、变色、裂开、起泡等外观不良
2.高低温测试 (High and low temperature test)
Set parameters, products will be tested into constant temperature and humidity inside the instrument, shut the door, open the test box lamp switch, through the observation window light to check the test place, select the controller operation indication screen, according to the operation button, the machine began to work until the specified time to complete the beta test can be taken out
设定好参数, 将待测产品放入恒温恒湿仪器内, 关好箱门, 打开试验箱灯开关, 通过视窗观测灯检查被测试物放置情况, 选择控制器运转表示画面, 按运转键, 机器开始工作, 待到规定时间内测试完成即可取出

3.外观检查 (Check the appearance of the product)
No distortion, discoloration, splitting, blistering and so on
目视无变形、变色、裂开、起泡等外观不良

4.网络分析仪测试 (Vector Network Analyzer Test)

测试结果 (Test Results) : 1.外观检查 (Check the appearance of the product)
2.高低温测试 (High and low temperature test)
3.外观检查 (Check the appearance of the product)
4.网络分析仪测试 (Vector Network Analyzer Test)

测试项目 (Test Description) : 1.产品外观检查 (Check the appearance of the product)
Standard : See Test Method
数量 (Quantity) : 1 PCS

Test Result					
NO.	sample-1	sample-2	sample-3	sample-4	sample-5
Result	PASS	/	/	/	/
Conclusion : ☒ PASS ☐ FAIL					

2.高低温测试 (High and low temperature test)
Standard : See Test Method
数量 (Quantity) : 1 PCS

Test Result					
NO.	sample-1	sample-2	sample-3	sample-4	sample-5
Result	PASS	/	/	/	/
Conclusion : ☒ PASS ☐ FAIL					

3.检验产品外观 (Check the appearance of the product)
Standard : See Test Method
数量 (Quantity) : 1 PCS

Test Result					
NO.	sample-1	sample-2	sample-3	sample-4	sample-5
Result	PASS	/	/	/	/
Conclusion : ☒ PASS ☐ FAIL					

4.网络分析仪测试 (Vector Network Analyzer Test)
Standard : See Test Method
数量 (Quantity) : 1 PCS

Test Result					
NO.	sample-1	sample-2	sample-3	sample-4	sample-5
Result	PASS	/	/	/	/
Conclusion : ☒ PASS ☐ FAIL					

测试照片 (Test Photos) :



Step 1.产品外观检查图片 (Product appearance inspection picture).



Step2.测试图片 (Test picture)

程式组:	1	循环次数:	0001				
段号:	00	01	02	03	04	05	06
温度:	80.0	80.0	-40.0	-40.0	0.0	0.0	0.0
湿度:	90	90	0	0	0	0	0
时间 (H):	0	96	1	96	0	0	0
时间 (M):	20	0	0	0	0	0	9
TS:	OFF	OFF	OFF	OFF	OFF	OFF	OFF

Step3.产品外观检查图片 (Product appearance inspection picture) Step4. Vector Network Analyzer Test. (网络分析)
备注：产品在高温80℃，湿度90%；低温-40℃的环境下，各储存96小时后，电性能指标能满足规格范围，无变形，开裂以及其他异常，判OK。

~ ~ The End Of Test Report ~ ~

Approved: 汤伶俐

Checked: 鄢康凤

Tester: 李妹婧