

产 品 承 认 书

SPECIFICATION

客户名称 Customer :

客户料号 Customer P.N./ :

产品名称 Product Name : WIFI Antenna

产品料号 Number : HC-ANT-030-100MM

规格描述 Description : 2.4G,PCB, RG1.13,L:100mm, IPEX

版本 Version : V1.0

编制 Edit: 刘斌

审核 Check: 高磊

批准 Approval: 宋伟强

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品质部 Quality dep.:

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采购部 Purchasing Dep.:

承认日期 Approval date:

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版本	制定	修订内容	修订原因	日期
V1.0	刘斌		新增	20220920

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1 、装配图片 Picture



2 、主要部件组成 Part specification

Name: WIFI Antenna		Part no: HC-ANT-030-100MM
NO	Momponents	Material
1	Antenna oscillator	PCB
2	Cable	RG1.13
3	Connector	IPEX
4	Jacket	Shrink the tube

Concentrate:

1. The antenna radiation array adopts PCB substrate copper coating to make the antenna have good dielectric constant and structural reliability;
2. RG1.13 pure copper plated silver coaxial RF cable with excellent shielding and conduction effect of feeder line;
3. The use of gold plating for IPEX connector can ensure good conductivity and effectively prevent product oxidation;
4. After the finished product is made, a vector network analyzer should be used to test the performance of the full inspection antenna.

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3 、特性参数 Attribute parameters

频率范围 Frenquency Rang	2400-2500MHz
输入阻抗 Impedance	50Ω
驻波比 V.S.W.R	≤2.5
最大增益 Gain	4.97dBi
辐射方向 Radiation	Omnidirectional
极化方式 Polarization	Linear
镀层 Coating	Gold
天线尺寸 Height	41.5*11mm
馈线长度 Cable Length	100mm±3mm
工作温度 Working Temperature	-45℃ - +85℃
存放温度 Limit Temperature	-45℃ - +85℃
适用频段 Applicable band	WiFi,BT,Zigbee

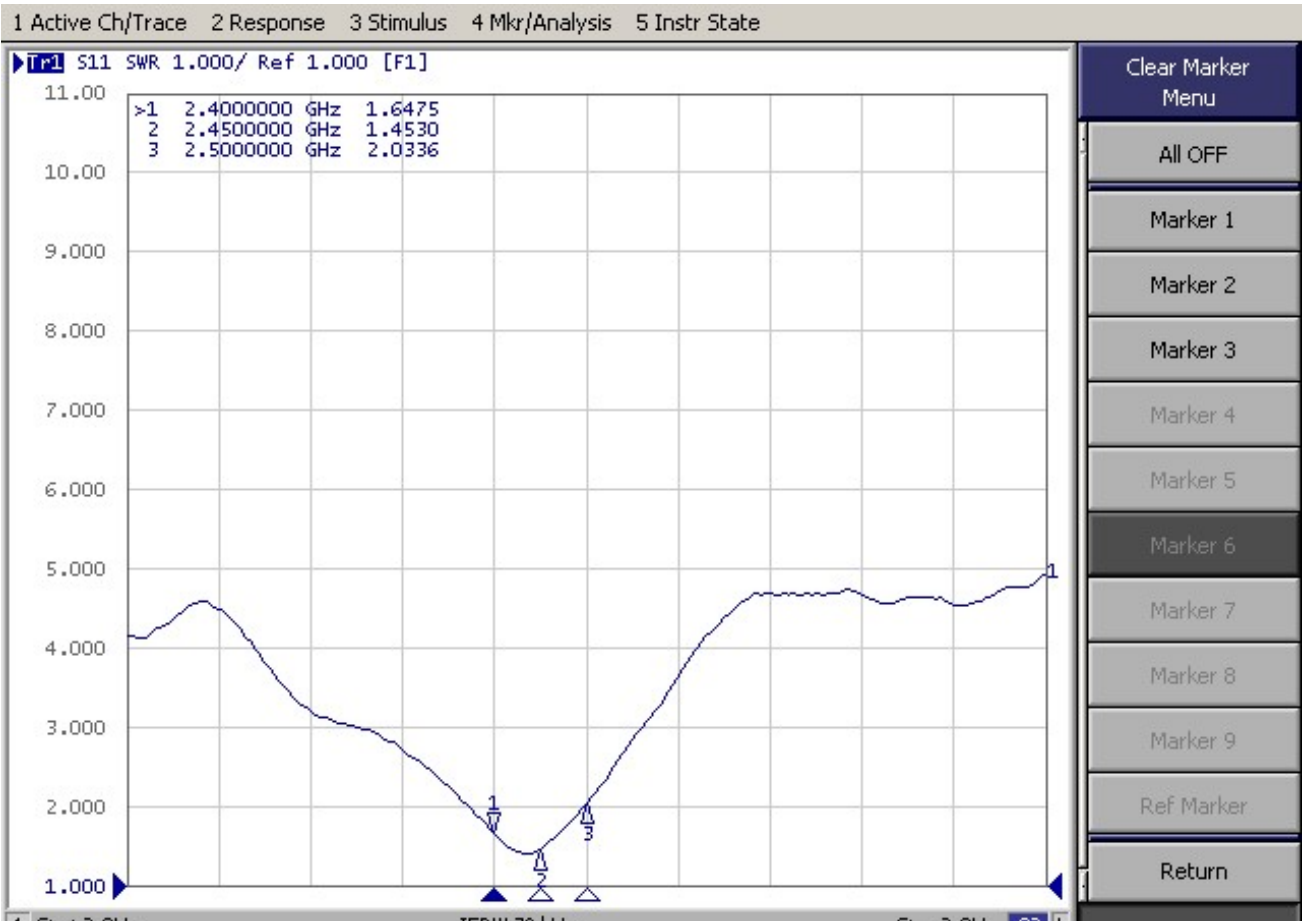
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5 、电性能测试 Electrical performance test

5.1、驻波比 V.S.W.R



2400MHz	2450MHz	2500MHz	-	-	-
1.64	1.45	2.03	-	-	-

Test instrument: E5071B

Test environment: prototype

Match terminals: prototype

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5.2、效率与增益 Gain Efficiency

Freq (MHz)	Gain (dBi)	Efficiency (dB)	Efficiency (%)
2400	4.885766309	-3.392659295	45.78614407
2410	4.822319215	-3.515367635	44.51057826
2420	4.890816295	-3.492082946	44.74986252
2430	4.884638117	-3.4639077	45.04112505
2440	4.919839964	-3.436854134	45.32257607
2450	4.923295819	-3.468331158	44.99527228
2460	4.948795486	-3.515183627	44.51246419
2470	4.971167994	-3.495061134	44.71918568
2480	4.935310827	-3.540568215	44.25304695
2490	4.856845805	-3.700141375	42.65656326
2500	4.757564267	-3.922534167	40.52719847

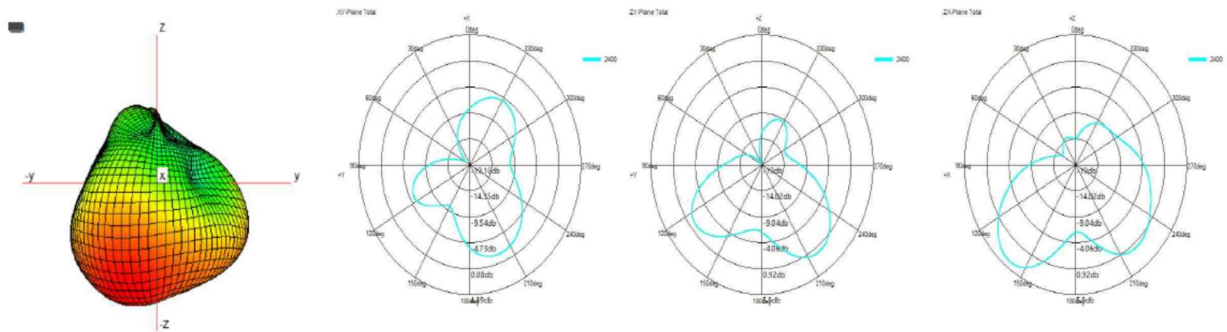
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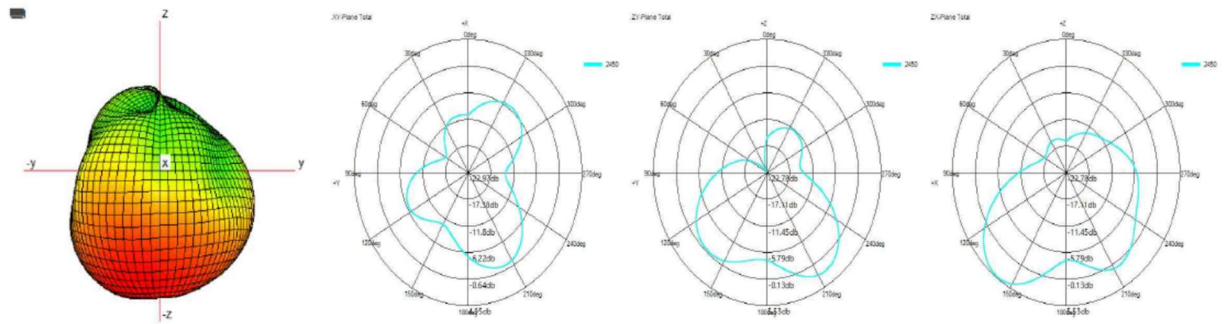
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5.2、方向图 Directional diagramain

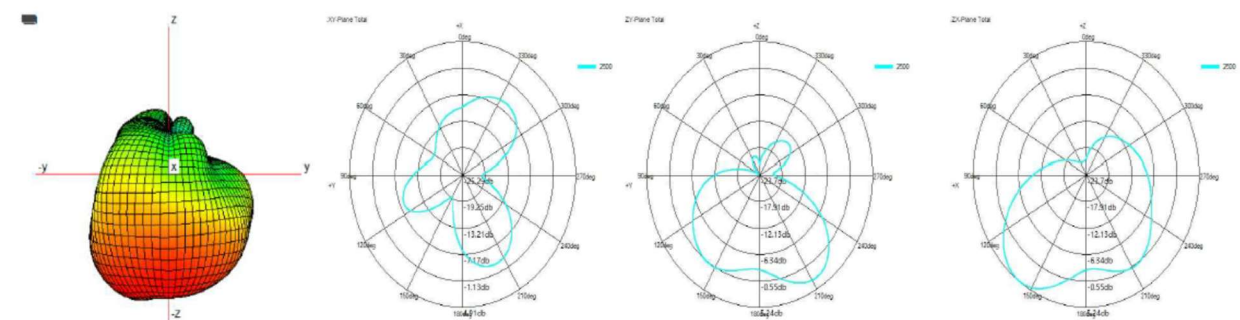
2400MHz



2450MHz



2500MHz



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6 、环境可靠性试验 Environmental test experiment

6.1、盐雾试验 Salt spray test

盐雾试验报告 Salt spray test report			
测试部门 Testing part:	QC	测试人员 Testers: 余飞	测试日期 Date: 2022.09.19
试验样板名称 Name of test sample:	五金连接器 Connector	样板型号 Type: IPEX 端子	样板数量 Number: 3PCS
试验项目 Test item:	盐雾试验 Salt spray test	设备名称 Device name:	盐雾腐蚀试验箱 Salt spray corrosion test chamber
试验方法 test method:	将测试样板放入调制好的盐溶液试验箱内、盐雾腐蚀箱进行连续喷雾试验 The test samples were put into the modulated salt solution test chamber and salt spray corrosion chamber for continuous spray test.		
盐溶液浓度 Concentration of salt solution:	52g/L	盐溶液 PH 值: 6.7	试验周期 Test cycle: 50h
试验标准 Test standard:	按照 GB/T10125 《人造气氛腐蚀试验、盐雾试验》进行试验；结果按照 GB/T6461-2002 《金属基体上金属和其他无机覆盖层经腐蚀试验后是试样和试件的评级》评级 The test shall be carried out in accordance with GB / t10125 corrosion test in artificial atmosphere and salt spray test; the results shall be rated in accordance with GB / t6461-2002 corrosion test of metal and other inorganic coatings on metal substrate and the rating of test pieces and test pieces		
试验结果 Result			
编号 NO	耐腐蚀等级 Grade	评定结果 Result	备注 Remarks
1	Rp/Ra=10/10vsB	合格 OK	
2	Rp/Ra=10/10vsB	合格 OK	
3	Rp/Ra=10/10vsB	合格 OK	

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6.2 高低温试验 High and low temperature test

环境可靠性测试 Environmental Performance		
测试项目 Test Description	测试程序和条件 Test Procedures & Condition	测试要求 Requirements
温湿测试 Humidity Temperature Cycling	测试条件 (Decay Test Conditions) : 温度: 25-65 °C: Temperature : 25 ~ 65°C 湿度: 90-95% Humidity : 90 ~ 95% (R.H) 持续时间: 24 小时 Duration : 24 hours	1, 外观良好 (No evidence of damage) 2, 电气性能符合产品规格要求 (The electrical performances should meet the spec. specified)
高温试验 High temperature test	测试条件 (Decay Test Conditions) : 温度: 90°C (Temperature: 90°C) 持续时间: 10 分钟 Duration: 10 Minute	1. 外观良好 (No evidence of damage) 2. 电气性能符合产品规格要求 (The electrical performances should meet the spec. specified)
低温试验 Low Temperature test	测试条件 (Decay Test Conditions) : 温度: -60±2°C (Temperature: -60±2°C) 持续时间: 10 分钟 Duration : 10 Minute	1. 外观良好 (No evidence of damage) 2. 电气性能符合产品规格要求 (The electrical performances should meet the spec. specified)

6.3 拉力测试 Tensile test

拉力测试 Tensile test					
产品名称 Name:	Wifi antenna	产品料号 part :	HC-ANT-030-100MM	数量 Numbe:	5PCS
规格描述 Specifications:	2.4G,PCB,RG1.13,L:100mm, ipex		日期 Date:	2022/09/19	
项目 Item:	拉力 pull		测试人 Testers:	于飞	
设备 Device:	拉力测试仪 Tensile tester		参考数 Reference value:	≥1.5kgf	
条件 Conditions:	温度 Temperature: 18-25℃, 湿度 Humidity≤70%RH				
样品 Sample:	1	2	3	4	5
结果 Result:	1.62	1.67	1.65	1.67	1.63
结果判定 Result:	☒合格 OK ☐不合格 NG				

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