

# 深圳市悦信通科技有限公司

ShenzhenShi Yue Xin Tong Technology CO., LTD

## 承 认 书

### SPECIFICATION FOR APPROVAL

客户名称

CUSTOMER NAME: Shenzhen Anjia Information Technology Co., Ltd.

产品名称

PRODUCT NAME: 2.4/5.8G 黄色天线 L=70mm+端子

产品型号: FPC0091

MODEL: FPC0091

制造商: 深圳市悦信通科技有限公司

Manufacturer: ShenzhenShi Yue Xin Tong Technology CO.,LTD

P/N:

REV: B

	MANUFACTURER SIGNATURE	CUSTOMER SIGNATURE
CHECKED BY:		
APPROVED BY:		
DATE:	2023/5/26	

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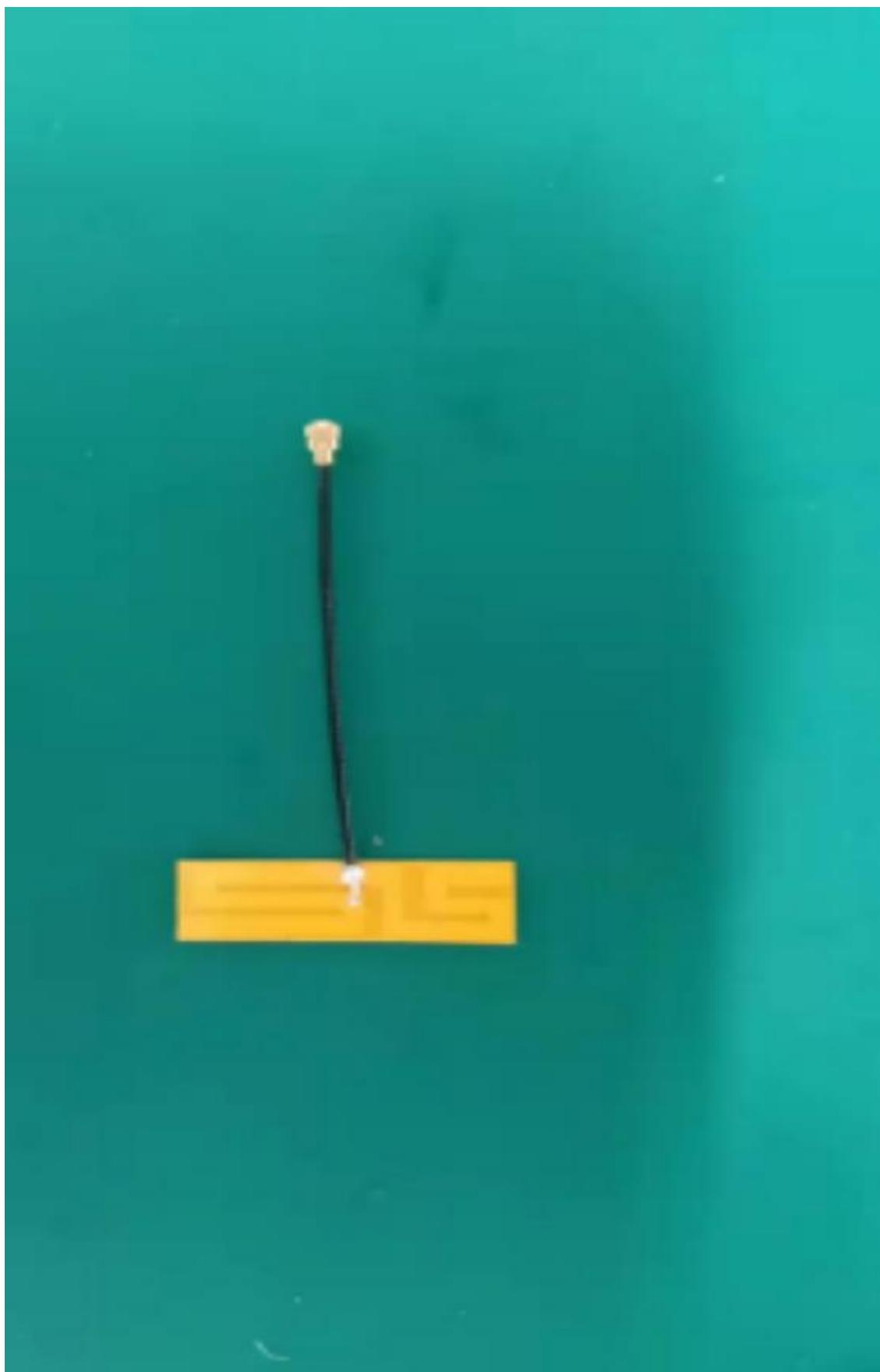
## 1. Specifications table:

主要技术指标		Main technical specifications	
频率范围 (MHZ)	2400-2500 5150-5825	Frequency Range (MHZ)	2400-2500 5150-5825
特性阻抗( $\Omega$ )	50	Impedance( $\Omega$ )	50
最大增益(dBi)	1.79	MAX Gain(dBi)	1.79
天线效率/%	>50%	Antenna Efficiency/%	>50%
输出电压 驻波比	$\leq 1.92$	VSWR	$\leq 1.92$
辐射方向	全向	Radiation Pattern	Omnidirectional
最大功率	1W	Admitted Power	1W
极化方式	线极化	Polarization	Line,Vertical
连接方式	同轴线+1.13 端子	Connector Type	RF Cable+1.13 terminal
介质耐压	/	Dielectric Strength	/
接触阻抗	/	Contact impedance	/
物理性能		Physical Properties	
天线本体材料	PC	Antenna Base	PC
工作温度	-20°C~+60°C	Operating Temp	-20°C~+60°C
保存温度	-20°C~+60°C	Storage Temp	-20°C~+60°C

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2. Finished product:



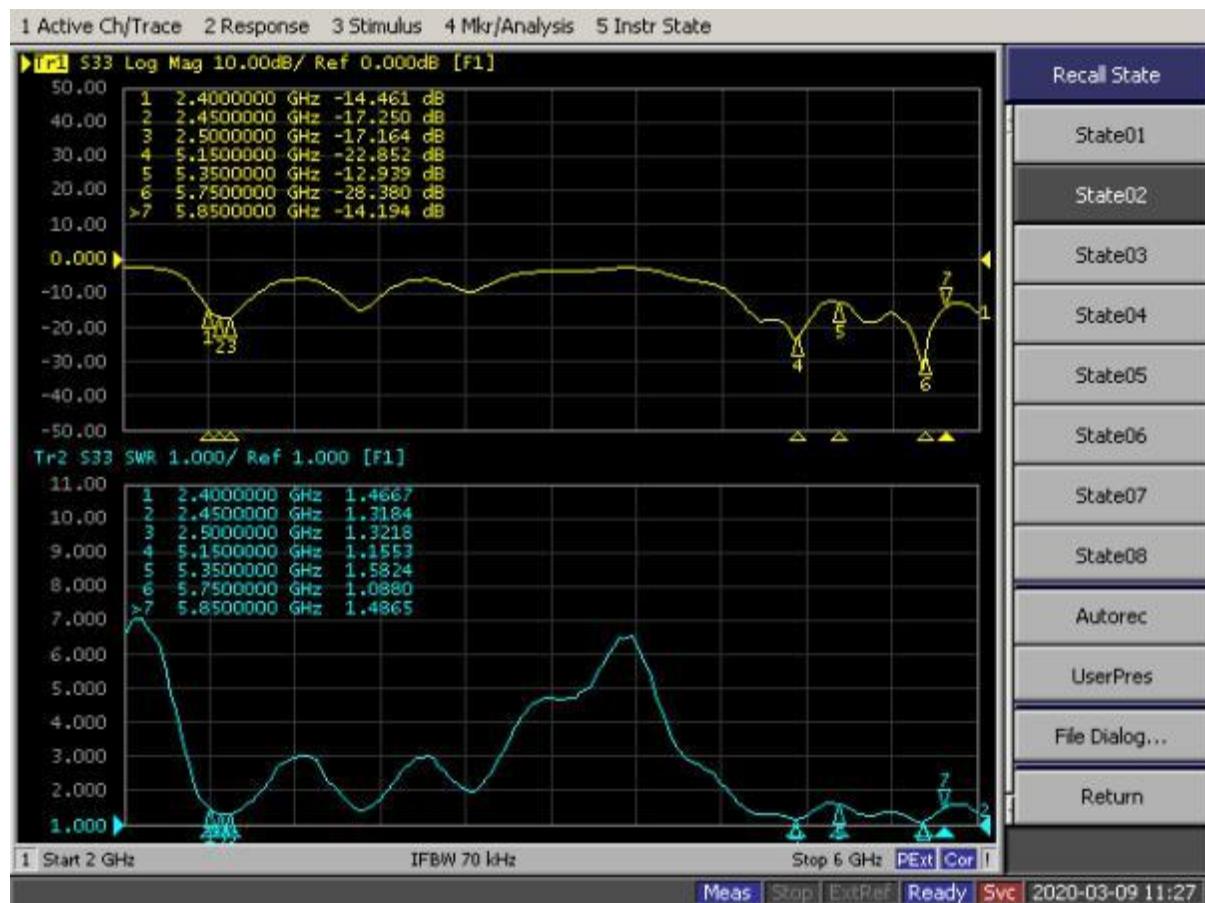
1	2	3	4	5	6	7	8																																																								
<b>ROHS Compliant</b>						Rev 版本 A1 Description 描述 首次发行 Designed 制图 刘荣 Date 日期 2024.12.06																																																									
<b>备注:</b> <p>1. 各部件组装要牢固, 稳定, 优异天线性能要达到承认书里相关射频性能指标。</p> <p>2. 产品用PE袋按照一定数量包装, 外加保护纸箱, 包装要安全可靠运输过程不能有损坏。</p> <p>3. 产品经确认后, 才能量产, 量产前未经认可不可以变更任何部件和材料。</p>																																																															
<b>4 产品要符合RoHS2.0 环保要求。</b> <b>部件材质工艺说明:</b>																																																															
<b>D</b> 序号 ① RM端子 ② 同轴线 ③ FPC	物料名称 RM端子 同轴线 FPC	材质/规格 铜黄铜 (1代) 双镀/FEP 单面电解铜	工艺说明 镀金 涂覆 /	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 25%;">Dim</th> <th style="width: 25%;">Grade</th> <th style="width: 25%;">General</th> <th style="width: 25%;">Tolerance</th> </tr> <tr> <th></th> <th></th> <th style="text-align: center;">A</th> <th style="text-align: center;">B</th> </tr> </thead> <tbody> <tr> <td>5-10</td> <td></td> <td style="text-align: center;"><math>\pm 0.10</math></td> <td style="text-align: center;"><math>\pm 0.20</math></td> </tr> <tr> <td>10-20</td> <td></td> <td style="text-align: center;"><math>\pm 0.15</math></td> <td style="text-align: center;"><math>\pm 0.30</math></td> </tr> <tr> <td>20-40</td> <td></td> <td style="text-align: center;"><math>\pm 0.20</math></td> <td style="text-align: center;"><math>\pm 0.40</math></td> </tr> <tr> <td>20-60</td> <td></td> <td style="text-align: center;"><math>\pm 0.30</math></td> <td style="text-align: center;"><math>\pm 0.50</math></td> </tr> <tr> <td>60-80</td> <td></td> <td style="text-align: center;"><math>\pm 0.40</math></td> <td style="text-align: center;"><math>\pm 0.60</math></td> </tr> <tr> <td>80&gt;</td> <td></td> <td style="text-align: center;"><math>\pm 0.50</math></td> <td style="text-align: center;"><math>\pm 0.80</math></td> </tr> </tbody> </table>				Dim	Grade	General	Tolerance			A	B	5-10		$\pm 0.10$	$\pm 0.20$	10-20		$\pm 0.15$	$\pm 0.30$	20-40		$\pm 0.20$	$\pm 0.40$	20-60		$\pm 0.30$	$\pm 0.50$	60-80		$\pm 0.40$	$\pm 0.60$	80>		$\pm 0.50$	$\pm 0.80$	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Date 日期:</td> <td>Unit 单位: mm</td> <td>Rev 版本: A1</td> <td>Scale 比例: 1:1</td> <td>CUS NO. 客户料号:</td> </tr> <tr> <td>Designed 设计:</td> <td>Material 材料:</td> <td colspan="3">Product Name 产品名称:FPC天线</td> </tr> <tr> <td>Checked 审核:</td> <td>Process 工艺:</td> <td colspan="3">Material Code 物料编码:</td> </tr> <tr> <td>Approval 批准:</td> <td>Third Angle 第三视角</td> <td colspan="3">Drawing Name 图纸编号:</td> </tr> </table>				Date 日期:	Unit 单位: mm	Rev 版本: A1	Scale 比例: 1:1	CUS NO. 客户料号:	Designed 设计:	Material 材料:	Product Name 产品名称:FPC天线			Checked 审核:	Process 工艺:	Material Code 物料编码:			Approval 批准:	Third Angle 第三视角	Drawing Name 图纸编号:		
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## 3. Test report

### 3.1: Network analyzer test report



### 3.2: 暗室 2D、3DRaditation Pattern(Machine data)

#### 3.2.1 Efficiency and gain

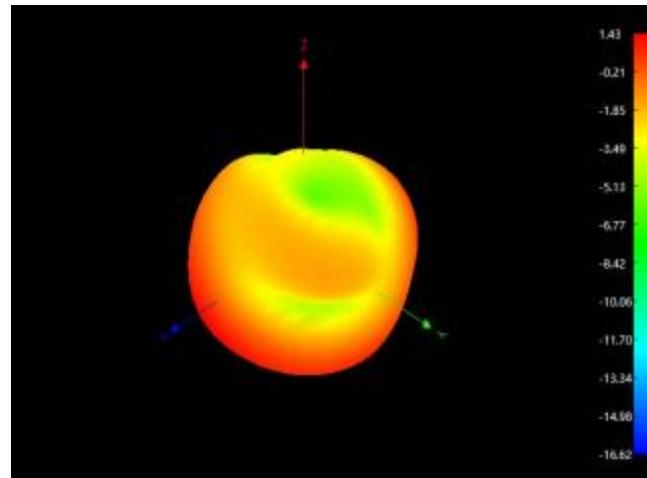
Frequency / MHz	Efficiency / dB	Efficiency / %	Gain/ dBi
2400	-1.88	64.89	1.39
2450	-1.85	65.28	1.43
2500	-1.82	65.81	1.79
5150	-2.45	56.88	1.96
5350	-2.51	56.05	2.37
5550	-2.50	56.29	3.19
5700	-2.55	55.58	2.64
5825	-2.30	58.83	2.55

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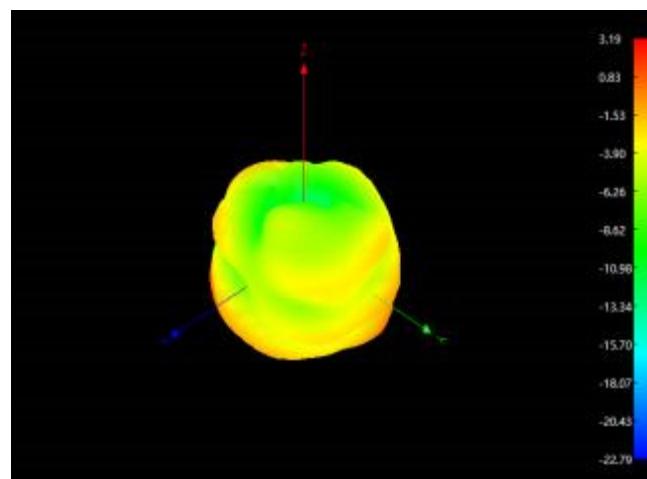
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## 3.2.2 2D/3D field type diagram

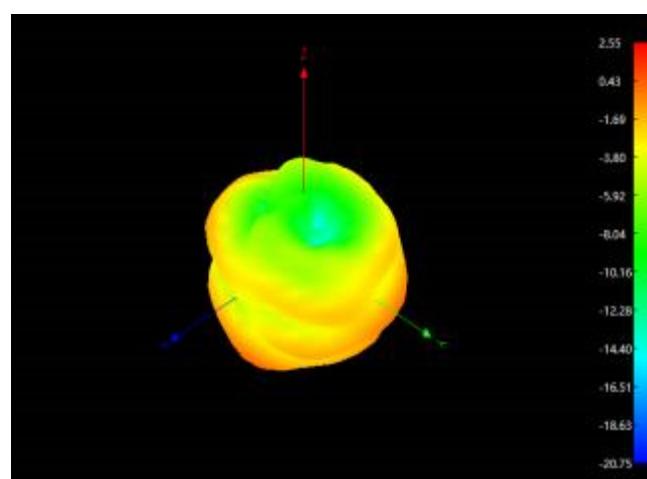
ANT 3D Radiation with MaxGain



2450MHz



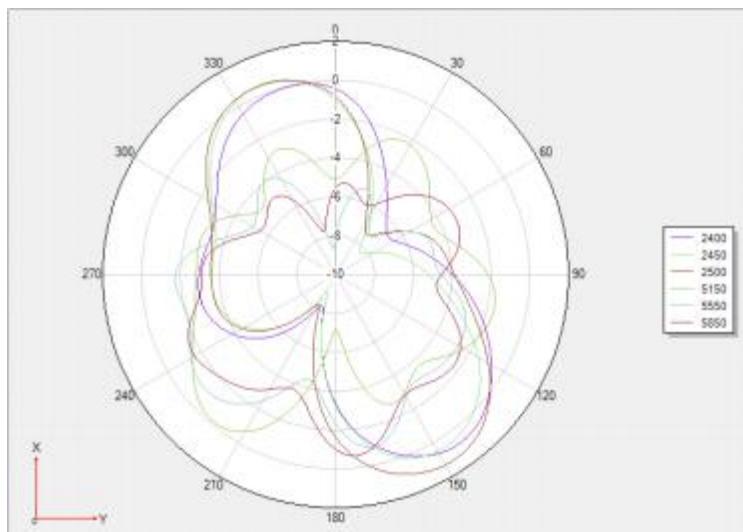
5550MHz



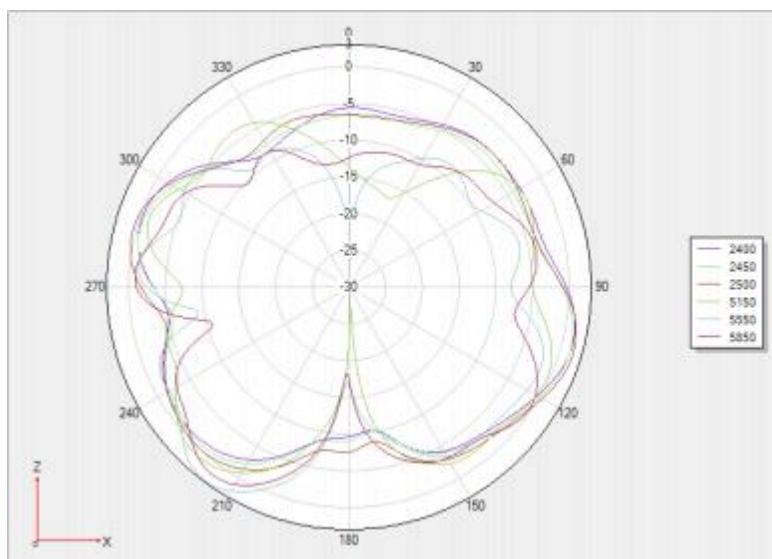
5850MHz

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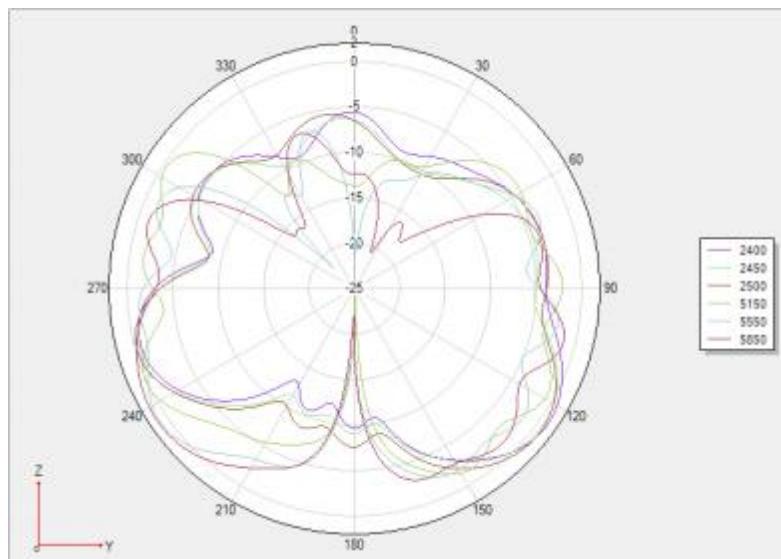
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Theta 90 2D 图



Phi 0 2D 图



Phi 90 2D 图

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## 4. Reliability test report

测试内容

test project	test condition	requirement	Number	judge
1、hot test	Store at 60C° ±2C° for 4H	After 2H at room temperature, each size meets the normal requirements, and there is no abnormal phenomenon such as deformation, warping, delamination and so on in appearance, and the performance is normal.	5pcs	PASS
2、cold test,	-Place in 20C° ±2C° environment for 4H	After 2H at room temperature, each size meets the normal requirements, and there is no abnormal phenomenon such as deformation, warping, delamination and so on in appearance, and the performance is normal.	5pcs	PASS
3、temperature cycling test	Leave in the 60C° ±2C° environment for 30 minutes, remove and leave at room temperature for 5 minutes, -20C° ±2C° environment for 30 minutes, remove and leave at room temperature for 5 minutes;	After such 5 cycles, each size meets the normal requirements, and there is no deformation, warping, delamination and other abnormal phenomena, and the performance is normal.	5pcs	PASS
4、Resistant to heat and warm	Place in an environment of temperature 40C° ±2C° and humidity 93±2%RH for XXH	After 4H at room temperature, each size meets the normal requirements, and there is no abnormal phenomenon such as deformation, warping, delamination and so on in appearance, and the performance is normal.	5pcs	PASS

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5、salt spray test	10-55 degrees salt solution: 500 ml/hr salt solution concentration: 5+/-1% test time: 48H	The surface is not oxidized and rusted	5pcs	PASS
6、Air tightness test	Pressure: 0.05M PA, inflation: 12S	Soak the whole product in water and inflate it for 12S without bubbles	5PCS	PASS
最终结论	<input checked="" type="checkbox"/> 合格		<input type="checkbox"/> 不合格	