

YUEQING HONGYI ELECTRONICS CO., LTD  
乐清市宏一电子有限公司

SPECIFICATION FOR APPROVAL  
承认书

CUSTOMER 客户名称	
DESCRIPRION 产品名称	FPC1004 宽系列连接器
ITEM NO 编 号	HY-B10014 (B14)
DATE 日 期	2023-08-20

CUSTOMER ACKNOWLEDGEMENT SEAL

客户承认印签

(APPROVAL) 核准	(ENGINEERING) 工程	(PURCHASE) 采购	(QUALITY) 品质
承认结果： <input type="checkbox"/> 通过 <input type="checkbox"/> 不通过 <input type="checkbox"/> 重新送样			

IS09001      IS014001      IS045001      IATF16949 体系认证

ADD: No. 30, Wenjing Road, Houyu village, Shifan street, Yueqing City, Zhejiang Province

地址：浙江省乐清市石帆街道后屿文景路 30 号

TEL:0577-62380521

FAX: 0577-62381979      P.C:325608

http: //www.zhehongyi.com

E-MAIL:yaohongxiao88@126.com



# 产 品 承 认 书 目 录

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# PRODUCT SPECIFICATION

## 产品规范

### 1、Scope

#### 适用范围

This specification includes the following specifications, including the specification of 1.00mm pitch FPC1004 wide size series connector  
本规范包括下列此种规格包括 1.00mm 间距 FPC1004 宽系列连接器规格说明

### 2、Appearance and Dimension

#### 外观及尺寸

2.1 Appearance: Product surface without defect, dirt, crack, and mechanical damage, Contact without rust, plating not oxidized and not peeled.

产品表面不应有对制品有害的缺陷、污垢、裂痕及机械损伤；接触件无锈蚀、镀层氧化脱落等现象

2.2 Dimension: According to drawings

外形尺寸：依照附图

### 3、Disposal of Material and surface

#### 材料与表面处理

Specification 规格内容		Material 材质	Finish 表面处理	Environmental protection grade 环保等级
Wafer 立贴针座	Plastic 塑壳	LCP UL94V-0	Color: Black 颜色: 黑色	RoHS2.0
	Contact 插针	Phosphor bronze 磷铜 厚 0.25mm	Tin Plating: 2.5~5 μm 镀锡: 2.5~5 μm	

### 4、Ratings and applicable wires

#### 额定等级

Item 项目	Standard 规格
Rated Voltage 额定电压	125V AC/DC
Rated Current 额定电流	1A AC/DC
Ambient temperature Range 使用温度范围	-25°C - +85°C
Suitable for flexible ribbon cables 适用软性排线	4-20 电路极数      0.30±0.03mm

## 5、Electrical Performance

### 电气性能

N0. 序号	Ltem 项目	Test mode 试验方法	Requirement 技术要求
5.1	ContactResistance 接触电阻	Male female cooperation, open voltage less than 20mV, current 100mA detection connector at both ends  公母配合, 开放电压20mV 以下, 电流100mA 检测连接器连接器两端	Initial:20mΩ Max 初始: 20mΩ Max  After Test: 30mΩ Max 试验后: 30mΩ Max
5.2	withstandvoltage 耐电压	Mate connectors, apply 500V AC for 1 minute between adjacent terminal or ground  公母配合, 在相邻端子, 端子与地片之间, 使用 500V 的交流电1 分钟, 检测连接器	No Breakdown and Flashover  外观无损伤, 无打火花
5.3	InsulationResistance 绝缘电阻	Mate connectors, apply 500V DC between adjacent terminal or ground  公母配合, 在相邻端子, 端子与地片之间, 使用 500V 的直流电, 检测连接器	100MΩ Min

## 6、机械性能

### Mechanical Performance

N0. 序号	Ltem 项目	Test mode 试验方法	Requirement 技术要求
6.1	FPC cable insertion force FPC 排线插入力	Insert the FPC ribbon cable into the Wafer at a rate of 25.4 ± 3mm per minute  以每分钟 25.4±3mm 的速率将 FPC 排线插入 Wafer	Per contact: 2N Max 单一接触点: 2N Max
6.2	FPC cable Retention Force FPC 排线保持力	Pulling out force of FPC flat cable along the conductor direction at the rate of 25.4 ± 3mm per minute  以每分钟 25.4±3mm 的速率将 FPC 排线从 Wafer 拔出力	Per contact: 0.4N Min 单一接触点: 0.4N Min
6.3	Pin Retention Force Pin 针保持力	Apply axial push force at the speed rate of 25.4±3mm/minute  以每分 25.4±3mm 的速率, 将 PIN 针从 Wafer 内轴向拔出力	Per contact: 2N Min 单一接触点: 2N Min

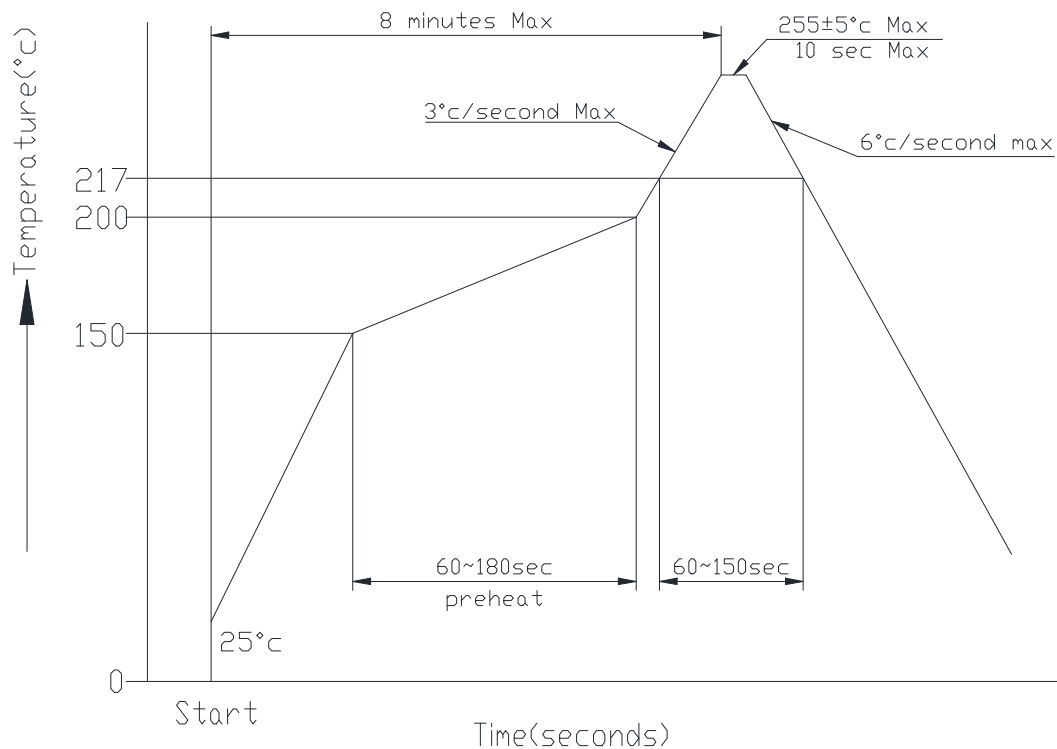
## 7、Endurance Characteristics:

### 环境性能

NO. 序号	Ltem 项目	Test mode 试验方法	Requirement 技术要求	
7.1	Repeated Insertion/ Withdrawal 重复插拔	When mated up to 20 cycles repeatedly by the rate of 10 cycles per minute  以每分钟不超过 10 次的速率,将公母插拔 20 次	Contact Resistance 接触电阻	30 mΩ Max
7.2	Vibration test 振动测试	Amplitude: 1.5mm P-P Sweep time: 10~55~10 HZ in 1 minute Duration: 2 hours in each X.Y.Z axials  振幅: 1.5mm P-P 时间: 10~55~10 HZ in 1 minute 持续时间: 每轴向 2 小时	Appearance 外观	No damage 无异常
			Contact Resistance 接触电阻	30 mΩ Max
			Discontinuity 瞬断	1 micro-second Max.
7.3	Heat Resistance 耐热性	85±2℃,96 hours	Appearance 外观	No damage 无异常
			Contact Resistance 接触电阻	30 mΩ Max
7.4	Cold Resistance 耐寒性	-25±3℃,96 hours	Appearance 外观	No damage 无异常
			Contact Resistance 接触电阻	30 mΩ Max
7.5	Humidity 耐湿性	Temperature: 60±2℃ Relative Humidity: 90~95% Duration: 96 hours  温度: 60±2℃ 湿度: 90~95%(RH) 持续时间: 96 hours	Appearance 外观	No damage 无异常
			Contact Resistance 接触电阻	30 mΩ Max
			Withstand Voltage 耐电压	No Breakdown and Flashover 外观无损伤,无打火花
			Insulation Resistance 绝缘电阻	100MΩ Min
7.7	温度变化 Temperature Cycling	5 cycles of: a) -25℃ 30 minutes b) +85℃ 30 minutes  从-25℃持续30 分钟升至+85℃持续30 分钟,循环5 次	Appearance 外观	No damage 无异常
			Contact Resistance 接触电阻	30 mΩ Max

NO. 序号	Item 项目	Test mode 试验方法	Requirement 技术要求	
7.8	Salt spray 盐雾	24±1 hours exposure to a salt spray from the 5±1% solution at 35±2°C  在温度35±2°C, 盐水浓度5±1%下, 盐水喷雾24±1 小时	Appearance 外观	No damage 无异常
			Contact Resistance 接触电阻	30 mΩ Max
7.9	Solderability 焊锡附着性	Soldering Time: 3-5sec solder Temperature: 245±5°C  焊接时间: 3-5 秒 焊接温度: 245±5°C	Solder Wetting 焊料润湿	Immersion area above 95%  浸渍面积 95% 以上
7.10	Solder- Resistance 焊锡耐热性	SMT reflow soldering heat resistance range: Soldering time:5~10sec solder. Temperature:255±5°C SMT 型回流焊接耐热范围: 焊接时间: 5~10 秒. 焊接温度: 255±5°C  Please refer to the 9.1 solder reflow temperature curve 回流焊请参考 9.1 温度曲线图	Appearance 外观	No damage 无异常

## 9、 SMT lead-free process temperature curve SMT 无铅工艺温度曲线



Notes: Please check the reflow soldering condition by your own devices beforehand. Because the condition changes by the soldering devices, P.C. boards, and so on

注记: 由于 P.C 板等焊接装置改变条件,所以请预先用自己的装置检查回流焊的条件

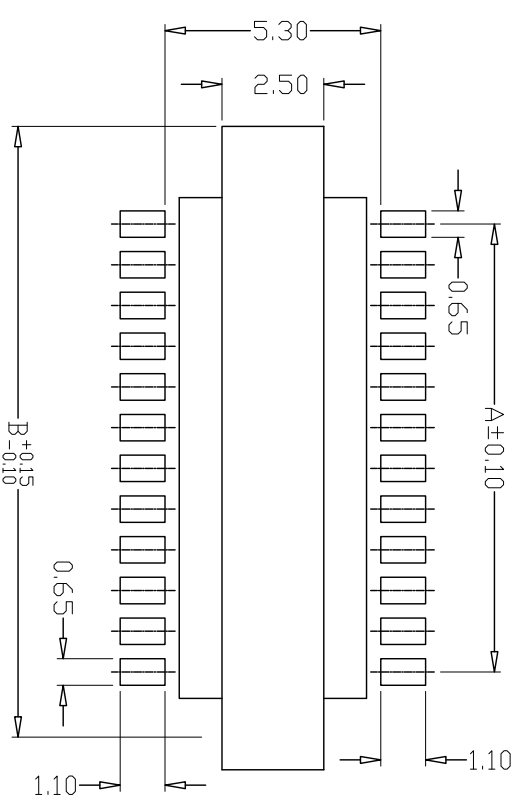
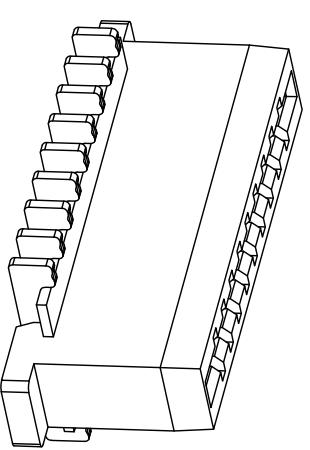
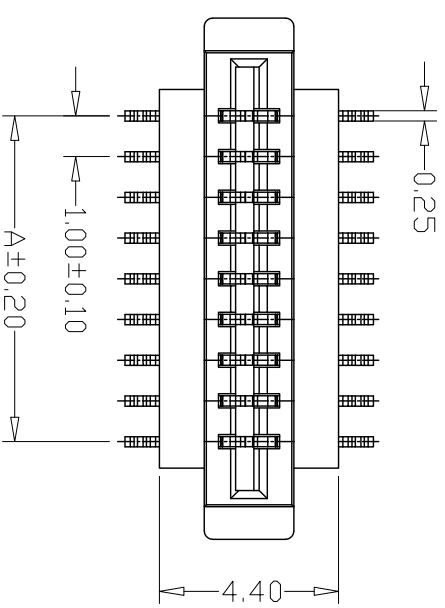
## 10、 Caution 注意事项

plastic because of characteristics with water after package is opened should avoid exposure to, the temperature is higher than 30 °C, humidity is higher than 60%RH in the environment, and in the 24 hours after all after use, to prevent subsequent reflow, wave soldering process to produce foaming phenomenon of deformation

塑料因具有吸水之特性包装拆封后应避免暴露于, 温度高于 30°C, 湿度高于 60%RH 的环境中, 并在拆封后 24 小时内全数使用完毕, 防止后续回流焊、波峰焊制程产生起泡变形现象

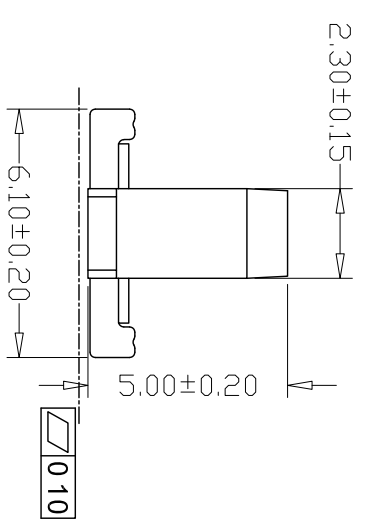
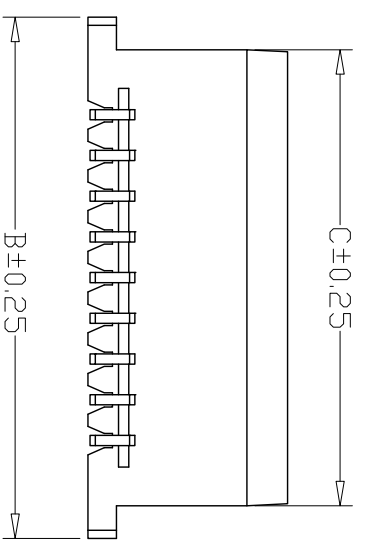


版本 REV.	日期 DATE	ECN NO.	变更内容 DESCRIPTION	制图 DRAWN



### PCB LAYOUT

PIN	尺寸 (mm)		
	A	B	C
-9AB	8.00	12.80	11.20
-12AB	11.00	15.80	14.20



### SPECIFICATIONS

- Current Rating: 1A AC, DC
- Voltage Rating: 125V AC, DC
- Temperature Range: -25°C~+85°C
- Contact Resistance: 20mΩ Max
- Insulation Resistance: 100MΩ Min
- Withstanding Voltage: 500V AC/minute
- Material: LCP, UL94V-0  
PIN Phosphor bronze Tin-plated

GENERAL TOLERANCE		制图 Mapping		张迎春	
X±0.25	X°±2°	审核		钱岳生	
X±0.25	X°±1°	批准		张名	
XX±0.15	XX°±0.5°	Approved		2023. 08. 20	
XXX±0.10	XXX°±0.5°	单位 Units	mm	比例 SCALE	

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