

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	2311788 系列连接器
ITEM NO 编号	HY-C25001 (C28)
DATE 日期	2023-09-09

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

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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 2.50mm pitch 2311788 series connector

本规范包括下列此种规格包括 2.50mm Pitch 2311788 Series 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 damang,Contactwithout 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 针座	Plastic 塑壳	PA6T UL94V-0	Color: Beige 颜色：黑色	RoHS2.0
	Contact 插针	Brass 黄铜 厚 0.64mm	Tin Mist:2.5~5 μm 雾锡：2.5~5 μm	
	2.8 Insert pin 2.8 插片引脚	Brass 黄铜 厚 0.80mm	Tin Mist:2.5~5 μm 雾锡：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	50V AC/DC
Rated Current 额定电流	7.5A AC/DC
Ambient temperature Range 使用温度范围	-30℃- +105℃
Applicable wire insulation 适用线径	AWG16#-22#

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50mV 以下, 电流100mA 检测连接器连接器两端	Initial:10mΩ Max 初始: 10mΩ Max After Test: 20mΩ Max 试验后: 20mΩ Max
5.2	withstandvoltage 耐电压	Mate connectors, apply 1000V 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1000V 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	Terminal crimping wire strength 端子压接导线强度	Fix the crimped terminal, apply axial pull out force on the wire 固定铆线后的端子, 使电线与端子分离时所需的最小力量	AWG#14 wire AWG#14 导线	120N Min
			AWG#16 wire AWG#16 导线	105N Min
			AWG#18 wire AWG#18 导线	90N Min
			AWG#20 wire AWG#20 导线	75N Min
			AWG#22 wire AWG#22 导线	50N Min
6.2	Terminal Retention Force 端子保持力	The maximum force required to pull the terminal out of the connector at a uniform speed of no more than 50mm per minute (including latch) 以每分钟不超过50mm的均匀速度将端子拔出连接器所需最大力	30N Min	

N0. 序号	Ltem 项目	Test mode 试验方法	Requirement 技术要求
6.3	Withdraw Force 拔出力	The maximum force required to pull out the connector at a uniform speed of no more than 50mm per minute 以每分钟不超过50mm的均匀速度将连接器拔出所需最大力	80N Min
6.4	Pin Retention Force Pin 针保持力	The force required to extract the PIN pin axially from the Wafer at a uniform speed of no more than 50mm per minute 以每分钟不超过 50mm 的均匀速度, 将 PIN 针从 Wafer 内轴向拔出的力量	Signal pin:15N Min 信号引脚: 15N Min Power pin:50N Min 电源引脚: 50N Min
6.5	Lock Retention Force 锁扣保持力	A housing and a header shall be mated , Pulling load shall be applied them, the load to make them come off each other shall be measured 将Housing与Wafer匹配后, 将Housing与Wafer内轴向拔出的力量, 看其卡扣的承受力量	50N Min

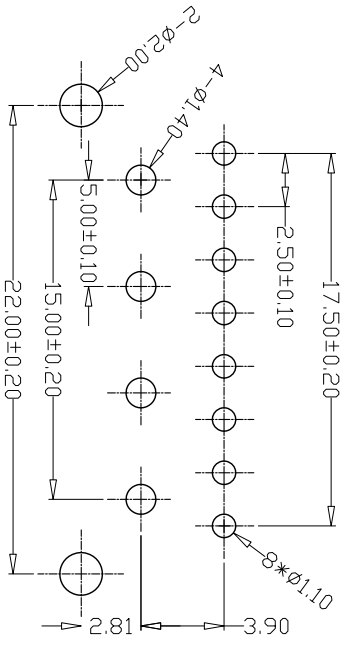
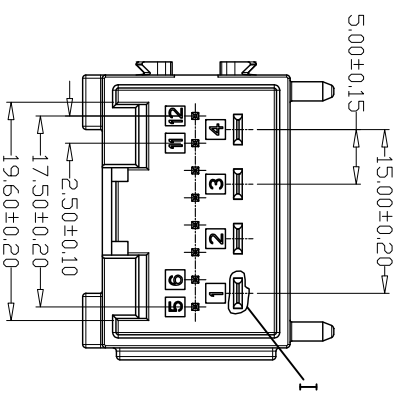
7、Endurance Characteristics:

环境性能

N0. 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 30 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 30 次	Contact Resistance 接触电阻	20 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	20 mΩ Max
			Discontinuity 瞬断	1 micro-second Max.
7.3	Temperature Rise 温升测试	Mating connectors shall be energized at rating current until thermal stability is achieved, and then measured the temperature rise 公母连接器配合后, 加载额定电流直到温度上升到稳定 状态, 然后再测量温升	Temperature Rise 温升测试	30°C Max

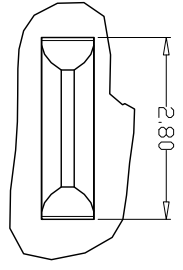
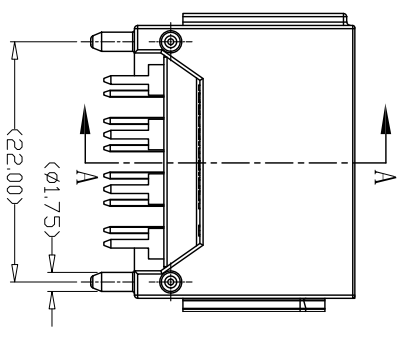
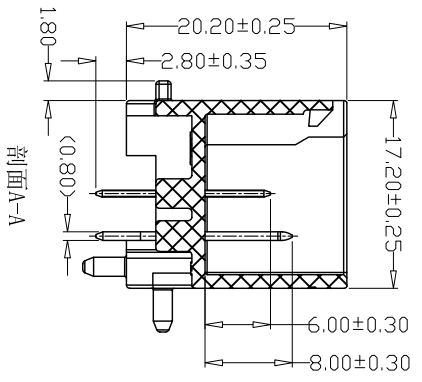
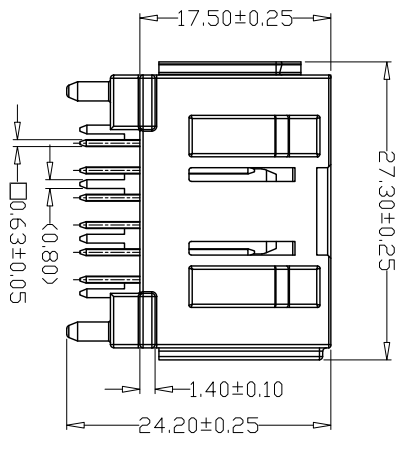
NO. 序号	Ltem 项目	Test mode 试验方法	Requirement 技术要求	
7.4	Heat Resistance 耐热性	105±2℃,96 hours	Appearance 外观	No damage 无异常
			Contact Resistance 接触电阻	20 mΩ Max
7.5	Cold Resistance 耐寒性	-30±3℃,96 hours	Appearance 外观	No damage 无异常
			Contact Resistance 接触电阻	20 mΩ Max
7.6	Humidity 耐湿性	Temperature: 60±2℃ Relative 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	20 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) -30℃ 30 minutes b) +105℃ 30 minutes 从-30℃持续30 分钟升至+105℃持续30 分钟, 循环5 次	Appearance 外观	No damage 无异常
			Contact Resistance 接触电阻	20 mΩ Max
7.8	Salt spray 盐雾	在温度35±2℃, 盐水浓度5±1%下, 盐水 喷雾24±1 小时 24±1 hours exposure to a salt spray from the 5±1% solution at 35±2℃	Appearance 外观	No damage 无异常
			Contact Resistance 接触电阻	20 mΩ Max
7.9	Solderability 焊锡附着性	焊接时间: 3-5 秒 焊接温度: 245±5℃ Soldering Time: 3-5sec solder Temperature: 245±5℃	Solder Wetting 焊料润湿	95%of immersed area must show no voids,pin holes. 浸渍面积需 95% 以上
7.10	Solder- Resistance 焊锡耐热性	Soldering time:5~10 sec solder. Temperature:255±5℃ 焊接时间: 5~10 秒. 焊接温度: 255±5℃	Appearance 外观	No damage 无异常

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

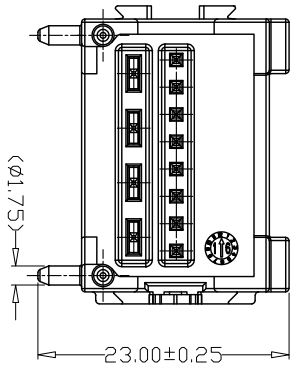


PCB LAYOUT

- SPECIFICATIONS
- Current Rating: 7.5A AC, DC
 - Voltage Rating: 50V AC, DC
 - Temperature Range: -30°C~+105°C
 - Contact Resistance: 10mΩ Max
 - Insulation Resistance: 100MΩ Min
 - Withstanding Voltage: 1000V AC/minute
 - Material: Wafer PA6T, UL94V-0 Black
PIN Brass Tin-plated



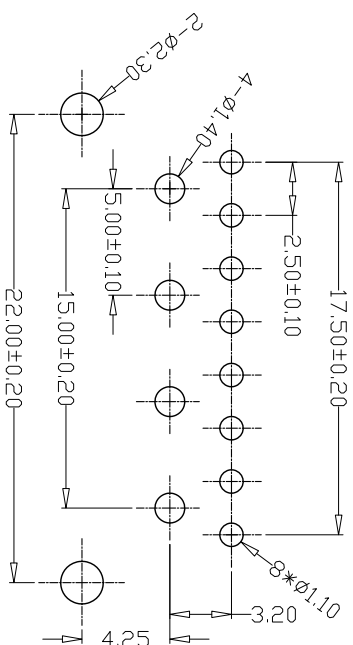
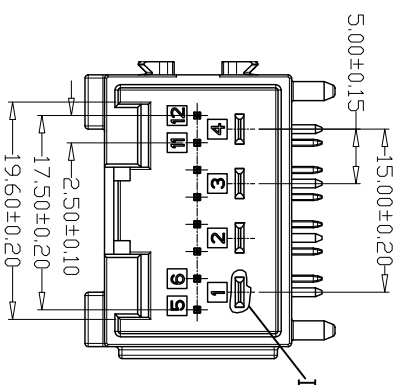
局部视图1:



GENERAL TOLERANCE		制图 Mapping	料号 PART NO.	版本 REV.
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X _{±0.25}	X _{±1°}	审核 钱岳生 2023、09、09	品名 2311788直针 WAFER DIP TYPE	页次 SHEET 1/1
X _{XX±0.15}	X _{XX±0.5°}	核准 张名 2023、09、09	客户料号 CITM. NO.	
X _{XX±0.10}	X _{XX±0.5°}	单位 Units mm 比例 SCALE		

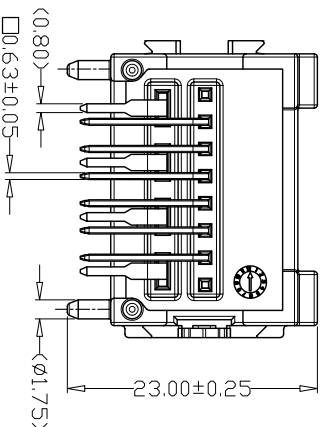
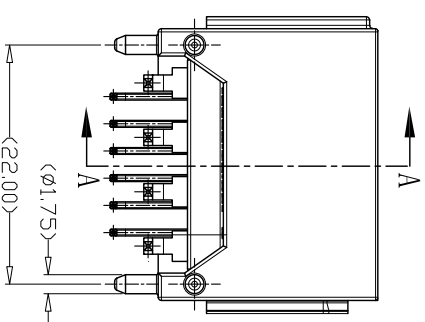
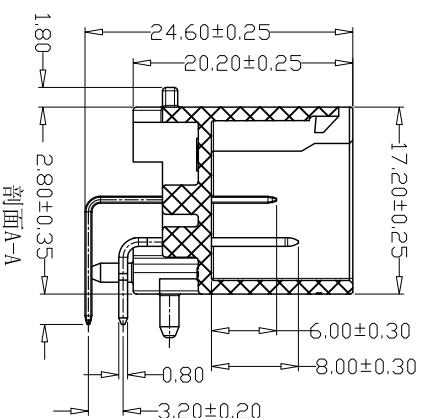
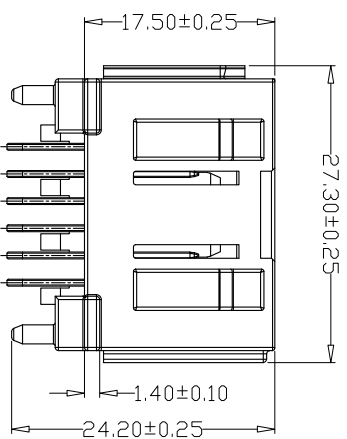
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版本 REV.	日期 DATE	ECN NO.	变更内容 DESCRIPTION	制图 DRAWN

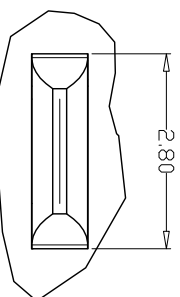


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局部视图1:



GENERAL TOLERANCE		制图 Mapping	料号 PART NO.	版本 REV.
X \pm 0.25	X \pm 2°	张迎春 2023. 09. 09	C25001-8AW	A
X \pm 0.25	X \pm 1°	钱岳生 2023. 09. 09	2311788	页次 SHEET
X \pm 0.15	X \pm 0.5°	核准 Approved	客户料号 CUSTOMER PART NO.	1/1
XXX \pm 0.10	XXX \pm 0.5°	单位 Units	2023. 09. 09	
		mm	比例 SCALE	

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