

产品规格书

PRODUCT SPECIFICATION

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产品规格: GJ-A2001 系列	No.: EN-004(2019-09)	Date Issued: Sep.20, 2019
Specification: GJ-A2001 Series	Rev. : A.0	Date Revised:
2.0mm pitch/Disconnectable Crimp style connectors		Issued by: Engineering Dept.

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产 品 型 号: A2001 系列 (2.0mm) 无铅环保产品 PART NUMBER: A2001 Series (2.0mm) Lead-free product	版本/Rev.	A.0
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【1.范围/Scope】

本产品规格书涵盖 **2.0mm** 间距 (**A2001****系列) 连接器的性能测试和要求

This product specification covers the performance testing and requirements of 2.0 mm Pitch (A2001 series) connectors**

【2. 名称和产品料号 / Part name & Part number】

产品名称 Part name	产品料号 Part number
端子 / Terminal	A2001TF
胶壳 / Housing	A2001HF
针座 / Header	A2001WRD A2001WRD-LE A2001WVD

【3. 材质结构和表面处理 / Construction, Dimensions, Material & Surface Finish】

产品结构和尺寸符合图纸

Construction and dimensions shall be in accordance the referenced drawings.

产品材质和表面处理符合以下规定:

Material and surface finish shall be as specified below.

产品名称/Part name		材质/Material	表面处理/Surface Finish
端子 / Terminal		Phosphor bronze	Tin-plated
胶壳 / Housing		Nylon66	Flammability: UL94V-0
针座 Header	针 / Post	Phosphor bronze	Tin-plated
	塑胶 / Wafer	LCP	Flammability: UL94V-0/2

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【4. 规格 / Main Specifications】

- 接触电阻 (Contact resistance) : $\leq 20\text{m}\Omega$
- 绝缘电阻 (Insulation resistance) : $\geq 1000\text{M}\Omega$
- 额定电压 (Rated voltage) : 250V AC DC
- 额定电流 (Rated current) : 3.0A AC DC
- 耐 电 压 (Withstand Voltage) : 800V AC/minute
- 温度范围 (Temperature Range) : $-25^{\circ}\text{C} \sim +85^{\circ}\text{C}$
- 适用线规 (Applicable wire) : AWG#30 to #24
- 线 数 (Poles no) : 6P (2x3) to 40P (2x20)

- Conforms to The RoHS Instruction
- Conforms to The REACH Instruction



Recognized on passage

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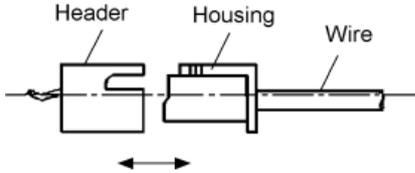
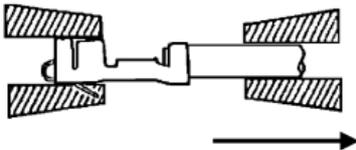
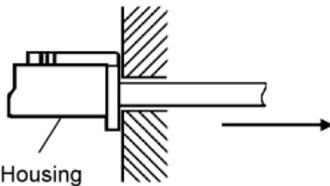
【5. 性能 / Performance】

5-1 电气性能 **Electrical Performance**

项目 / Item		条件 / Test Condition	规格 / Requirement
5-1-1	接触阻抗 Contact Resistance	按下图所示装配的试样 A 点和 B 点之间的接触阻抗。电流: DC 10mA ; 开路电压: 20mV(max.) Contact between points A and B of a specimen assembled for actual use as shown in the figure on the below side shall be measured under the following conditions test current: 10mA (DC) open voltage: 20mV(max.)	Initial: 10 mΩ MAX. After test: 20 mΩ MAX.
5-1-2	绝缘阻抗 Insulation Resistance	应在配对试样的相邻触点之间施加 500V 直流电, 以测量绝缘电阻 500V DC shall be applied between adjacent contacts of a mated specimen to measure insulation resistance	Initial: 1000 MΩ MIN. After test:500MΩ MIN.
5-1-3	耐电压 Dielectric Strength	在规定的试验电压应在配对试样的相邻触点之间施加一分钟 800V AC Testing voltage specified below shall be applied between adjacent contacts of a mated specimen for one minute	无击穿、打火 There shall be no breakdown of flashover

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5-2 机械性能 Mechanical Performance

项目 / Item		条件 / Test Condition	规格/Requirement	
5-2-1	插入力 拔出力 Insertion and Withdrawal Force	以每分钟 25mm/min 速度插入和拔出 Insert and withdraw connectors at the speed rate of 25mm/min 	参照第 6 项 Refer to paragraph 6	
5-2-2	抗拉强度 crimp tensile strength	对铆压好的端子和电线施加拉力, 测量将电线拉出端子或电线断开的力 (测试速度: 25mm/min) Pulling load shall be applied to a correctly crimped terminal and a wire. the load to pull the wire out of the terminal or break the wire shall be measured (Testing speed: 25mm/min) 	Wire to be used	Kg/f min.
			AWG #28	1.50
			AWG #26	2.00
			AWG #24	3.00
			AWG #22	4.00
5-2-3	端子插入力 Terminal insertion force	铆压好的端子插入胶壳 Insert the crimped terminal in the housing at a constant speed of 25±3mm per minute	7.8N [0.8Kgf] MAX.	
5-2-4	端子保持力 Contact Retention Force	测量: 1~5mm/秒 速度从胶壳中轴向拉出端子线的力 Crimped contact shall be mounted in a housing and pulled in the axial direction. the load to pull the contact out of the housing shall be measured (testing speed: 1 to 5mm/sec.) 	10N [1.0Kgf] MIN.	

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项目 / Item		条件 / Test Condition	规格/Requirement
5-2-5	Pin 针保持力 Pin Retention Force	以每分钟 25mm/分钟 速度将 Pin 针从胶体内轴向推出的力 The end of a post shall be pushed perpendicularly. The load to make the post start moving from a wafer shall be measured(testing speed:25mm/min.)	10N [1.0Kgf] Min.

5-3 环境试验 Environmental test

项目 / Item		条件 / Test Condition	规格/Requirement	
5-3-1	耐久性 Durability	配套插拔 30 次后测量接景电阻 A housing with crimped contacts and a header shall be mated and unmated. After repeated 30 cycles, contact resistance shall be measured	接触阻抗 Contact Resistance	20 mΩ MAX.
5-3-2	耐振动性 Vibration	试样安装在 PCB 板上,在以下条件下振动测试,过程中检查电流的连续性。试验后测量接触电阻 The specimen shall be mounted on a PCB and subjected to a vibration test of the following conditions. During the test, current continuity shall be checked. After the test, contact resistance shall be measured Frequency : 10~55~10 Hz/min. Amplitude : 1.5 mm Direction : each of X Y Z-axis directions period: 2 hours for each direction	外观 Appearance	无异状 No Damage
			接触阻抗 Contact Resistance	20 mΩ MAX.
			瞬断 Discontinuity	1μsec. MAX.

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项目 / Item		条件 / Test Condition	规格/Requirement	
5-3-3	热冲击 Thermal shock	在下列条件下对样品进行热冲击试验, 后测量接触电阻、绝缘电阻及耐电压 The specimen shall be subjected to a thermal shock test of the following conditions. after the test, contact resistance, insulation resistance and dielectric withstanding voltage shall be measured 1 Cycle consists of : -25°C for 30 minutes +85°C for 30 minutes total cycles:25cycles	绝缘电阻 Insulation resistance	500MΩ Min.
			接触阻抗 Contact Resistance	20 mΩ MAX.
			耐电压 Dielectric Strength	无击穿和打火 No breakdown flashover
5-3-4	耐热性 Heat Aging	在 85±2°C 环境中放置 96 小时后测试接触电阻 The specimen shall be placed in a heat oven at 85±2°C for 96 hours. after the test, contact resistance shall be measured [MIL-STD-202 Method 108A Cond. A]	外观 Appearance	无异状 No Damage
			接触阻抗 Contact Resistance	20 mΩ MAX.
5-3-5	耐湿性 Humidity	暴露在温度 40°C , 湿度 90%~95% 环境下 96 小时后测试 The sample shall be placed for 168 hours at a temperature of 40°C and a humidity of 90%to95%. Measure the contact resistance, insulation resistance and dielectric withstand voltage after the test [MIL-STD-202 Method 103 Cond. A]	绝缘电阻 Insulation resistance	500MΩ Min.
			接触阻抗 Contact Resistance	20 mΩ MAX.
			耐电压 Dielectric Strength	无击穿和打火 No breakdown flashover

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项目 / Item		条件 / Test Condition	规格/Requirement	
5-3-6	盐水喷雾 Salt Spray	在温度 $35 \pm 2^{\circ}\text{C}$, 盐水浓度 5% 下, 盐水喷雾 24 ± 1 小时 the specimen shall be subjected to a salt spray test of the following conditions. after the test, it shall be washed with running water and dried naturally before the measurement of contact resistance NaCl solution: 1). Concentration: $5 \pm 1\%$ 2). Spray time: 24 ± 1 hours 3). Ambient temperature: 35°C [EIA-364-26A/MIL-STD-202 Method 101D Cond.B]	外观 Appearance	无异状 No Damage
			接触阻抗 Contact Resistance	20 mΩ MAX.
5-3-7	可焊性 Solderability	将样品焊接部位按以下条件浸入锡炉 Fluxed soldering section of a specimen shall be dipped in solder of the following conditions Solder: Sn-3Ag-0.5Cu Flux: activation flux Solder temperature: $245 \pm 5^{\circ}\text{C}$ Immersion period: 3 ± 0.5 Sec. [EIA-364-52]	浸渍面积需 95% 以上 95% of immersed area must show no voids, pin holes	

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项目 / Item		条件 / Test Condition	规格/Requirement	
5-3-8	耐焊性 Resistance to Soldering Heat	样品安装在 PCB 板上, 并在下列条件下进行试验 The specimen shall be mounted on a PCB and subjected to a resistance to soldering heat test of the following conditions Solder: Sn-3Ag-0.5Cu Flux: activation flux Solder temperature: 260±5°C Immersion period: 5±0.5 Sec. [EIA-364-56A]	外观 Appearance	无异状 No Damage

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【6. 插入力及拔出力 / Insertion & Withdrawal Force】

UNIT: N

Number of circuits	At initial		Number of circuits	At initial	
	I.F. (max)	W.F. (min)		I.F. (max)	W.F. (min)
Single	4.00	1.50	09	52.00	16.50
02	24.00	6.00	10	56.00	18.00
03	28.00	7.50	11	60.00	19.50
04	32.00	9.00	12	64.00	21.00
05	36.00	10.50	13	68.00	22.50
06	40.00	12.00	14	72.00	24.00
07	44.00	13.50	15	76.00	25.50
08	48.00	15.00	16	80.00	27.00

注: 以上插拔次数为 30 次

Note: Insertion and Withdrawal for 30 cyc



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