

产品规格书

PRODUCT SPECIFICATION

Page: 1/11

产品规格: GJ-A1001 系列	No.: EN-008(2019-04)	Date Issued: Apr.08, 2019
Specification: GJ-A1001 Series	Rev. : A.0	Date Revised:
1.00mm pitch/wire to board connector		Issued by: Engineering Dept.

Prepared by: <i>James.Kang</i>	Checked by: <i>James.Kang</i>	Reviewed by: <i>James.Kang</i>	Approved by: <i>Liangdong.Yi</i>
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地址: 广东省东莞市长安镇上沙第二工业区创盛路 14 号
Add: No.14, Chuangsheng Road, Shangsha Second Industrial Zone, Changan Town, Dongguan City, Guangdong
电话: 0769-81669553 传真: 0769-81669553



产 品 型 号: A1001 系列 (1.00mm) 无铅环保产品 PART NUMBER: A1001 Series (1.00mm) Lead-free product	版本/Rev.	A.0
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目录/Index

1. 范围/Scope
2. 名称和产品料号 / Part name & Part number
3. 材质结构和表面处理 / Construction, Dimensions, Material & Surface Finish
4. 规格 / Main Specifications
5. 性能 / Performance
 - 5.1 电气性能 / Electrical Performance
 - 5.2 机械性能 / Mechanical Performance
 - 5.3 环境性能 / Environmental Performance
6. 插入力及拔出力 / Insertion & Withdrawal Force

产 品 型 号: A1001 系列 (1.00mm) 无铅环保产品 PART NUMBER: A1001 Series (1.00mm) Lead-free product	版本/Rev.	A.0
	日期/Date	Apr.08,2019

【1.范围/Scope】

本产品规格书涵盖 1.00mm 间距 (A1001**系列) 连接器的性能测试和要求

This product specification covers the performance testing and requirements of 1.00 mm Pitch (A1001 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	A1001TF
胶壳 / Housing	A1001HF
针座 / Wafer (SMT TYPE)	A1001WRS
	A1001WVS

【3. 材质结构和面处理 / 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何以下规定:

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

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	日期/Date	Apr.08,2019

【4. 规格 / Main Specifications】

- 接触电阻 (Contact resistance) : $\leq 20\text{m}\Omega$
- 绝缘电阻 (Insulation resistance) : $\geq 100\text{M}\Omega$
- 额定电压 (Rated voltage) : 50V AC DC
- 额定电流 (Rated current) : 1.0A AC DC
- 耐 电 压 (Withstand Voltage) : 500V AC/minute
- 温度范围 (Temperature Range) : $-25^{\circ}\text{C}\sim+85^{\circ}\text{C}$
- 适用线规 (Applicable wire) : AWG#32 to #28
- 线 数 (Poles no) : 2 to 16P

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



Recognized on passage

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	日期/Date	Apr.08,2019

【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	装配的试样, 两端施以最大测试电压 20mV, 最大电流 10mA, 测量 Mate connectors, and measure by dry circuit, 20mV MAX., 10mA MAX.	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 【MIL-STD-202 302】	100MΩ 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 500V AC Testing voltage specified below shall be applied between adjacent contacts of a mated specimen for one minute 500V AC	无击穿、打火 There shall be no breakdown of flashover

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	日期/Date	Apr.08,2019

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 25±3mm/min 速度插入和拔出 Insert and withdraw connectors at the speed rate of 25±3mm/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: 25±3mm/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: 25±3mm/min)	AWG. #28	10N MIN.
			AWG. #30	8N MIN.
			AWG. #32	5N MIN.
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	5N 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.)	7N Min.	
5-2-5	Pin 针保持力 Pin Retention Force	以每分钟 25±3mm/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:25±3mm/min.)	8N Min.	

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	日期/Date	Apr.08,2019

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 次后测量接触电阻 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	40 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	40 mΩ MAX.
			瞬断 Discontinuity	1μsec. MAX.
5-3-3	耐热性 Heat Aging	在 85±2℃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℃ 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	40 mΩ MAX.

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	日期/Date	Apr.08,2019

项目 / Item		条件 / Test Condition	规格/Requirement	
5-3-4	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 for 30 minutes +85 for 30 minutes total cycles:5cycles	绝缘电阻 Insulation resistance	100MΩ Min.
			接触阻抗 Contact Resistance	40 mΩ MAX.
			耐电压 Dielectric Strength	无击穿和打火 No breakdown flashover
5-3-5	耐湿性 Humidity	暴露在温度 40℃, 湿度 90%~95%环境下 96 小时后测试 The sample shall be placed for 96 hours at a temperature of 40℃ and a humidity of 90%to95%. Measure the contact resistance, insulation resistance and dielectric withstand voltage after the test	绝缘电阻 Insulation resistance	100MΩ Min.
			接触阻抗 Contact Resistance	40 mΩ MAX.
			耐电压 Dielectric Strength	无击穿和打火 No breakdown flashover

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	日期/Date	Apr.08,2019

项目 / Item		条件 / Test Condition	规格/Requirement	
5-3-6	盐水喷雾 Salt Spray	在温度 35±2°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±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	40 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±5°C Immersion period:2±0.5 Sec.	浸渍面积需 90% 以上 90% 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: 2±0.5 Sec.	外观 Appearance	无异状 No Damage

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	日期/Date	Apr.08,2019

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

UNIT: N

PIN 数 No. of CKT	首次插入力 (最大值) Initial I.F. (MAX.)	首次拔出力 (最小值) Initial W.F. (MIN.)	第 30 次拔出力 (最小值) W.F. at 30th (MIN.)
02	20.00	2.00	2.00
03	20.00	2.00	2.00
04	20.00	2.00	2.00
05	30.00	3.00	3.00
06	30.00	3.00	3.00
07	30.00	3.00	3.00
08	40.00	4.00	4.00
09	40.00	4.00	4.00
10	40.00	4.00	4.00
11	50.00	5.00	5.00
12	50.00	5.00	5.00
13	50.00	5.00	5.00
14	60.00	6.00	6.00
15	60.00	6.00	6.00
16	60.00	6.00	6.00

注: 以上插拔次数为 **30** 次