

产品规格书

PRODUCT SPECIFICATION

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产品规格: GJ-A1501 系列	No.: EN-010(2019-09)	Date Issued: Sep.22, 2019
Specification: GJ-1501 Series	Rev. : A.0	Date Revised:
1.5mm pitch/Disconnectable Crimp style connectors	Issued by: Engineering Dept.	

Prepared by: <i>James.Hang</i>	Checked by: <i>James.Hang</i>	Reviewed by:	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: A1501 系列 (1.5mm) 无铅环保产品 PART NUMBER: A1501 Series (1.5mm) Lead-free product	版本/Rev.	A.0
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【1.范围/Scope】

本产品规格书涵盖 **1.5mm** 间距 (**A1501****系列) 连接器的性能测试和要求

This product specification covers the performance testing and requirements of 1.5 mm Pitch (A1501 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	A1501TF
胶壳 / Housing	A1501HF
针座 / Header	A1501WRS
	A1501WVS

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) : $\geq 500\text{M}\Omega$
- 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) : $-25^{\circ}\text{C}\sim+105^{\circ}\text{C}$
- 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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【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]	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 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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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	9.8N [1.0Kgf] MIN.
			AWG. #30	4.9N [0.5Kgf] MIN.
			AWG. #32	3.4N [0.3Kgf] 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	10N [1Kgf] 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 [1Kgf] MIN.	
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 [1Kgf] MIN.	

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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	30 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 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	30 mΩ MAX.
			瞬断 Discontinuity	1μsec. MAX.
5-3-3	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	30 mΩ MAX.

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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°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	30 mΩ MAX.
			耐电压 Dielectric Strength	500V,AC/Minute 无击穿和打火 No breakdown flashover
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	30 mΩ MAX.
			耐电压 Dielectric Strength	500V,AC/Minute 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	30 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: Kgf

Number of circuits	At initial		At 30th
	I.F. (max)	W.F. (min)	W.F. (min)
2	1.5	0.5	0.2
3	2.0	0.6	0.3
4	2.5	0.7	0.4
5	3.0	0.8	0.5
6	3.2	0.9	0.6
7	4.0	1.0	0.7
8	4.5	1.1	0.8
9	5.0	1.2	0.9
10	5.5	1.3	1.0
11	6.0	1.4	1.1
12	6.5	1.5	1.2
13	7.0	1.6	1.3
14	7.5	1.7	1.4
15	8.0	1.8	1.5
16	8.5	1.9	1.6

注：以上插拔次数为 **30** 次

Note: Insertion and Withdrawal for 30 cycles



东莞市高嘉精密电子有限公司

DONGGUAN GAOJIA PRECISION ELECTRONICS CO.,LTD



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