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| Product Specification [产品规格书]: | Document No | PS-A1252-01 |
| Subject [主题]: 1.25mm Pitch A1252 Series Connector Specification | Date Issued | 2014/01/10 |
| | Date Revised | 2020/05/16 |
| | Version | A |

This specification is referred to the 1.25mm series wire to board connector

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【1.适用范围 Scope】

此种规格包括 1.25mm Pitch A1252 Series 连接器规格说明.

This Specification Covers the 1.25mm Pitch A1252 Series Connector Specification.

【2.规格与料号 Spec and Part number】

| 规格内容 Specification | 产品料号 Production No. | 产品图示 Picture of Product |
|-----------------------|------------------------|----------------------------|
| 端子/Terminal | A1252T-XXX | |
| 胶壳/Housing | A1252H-XXX | |
| 针座/Wafer | A1252WRS-XXXX | |

【3.材质与表面处理 Disposal of Material and surface】

| 规格内容 Specification | 材质 Materials | 表面处理 Disposal of Surface |
|-----------------------|--------------------|--|
| 端子/Terminal | 磷铜/Phosphor Bronze | Nickel: Over 30μ" Min. Gold Flash or 1μ" or 3μ" Tin 70u" Min or 100u" Min |
| 胶壳/Housing | PA66 | UL 94V-0 |
| 针座/Wafer | Base | High Temperature Plastic UL 94V-0 |
| | PIN | 磷铜/Phosphor Bronze Nickel: Over 30μ" Min. Gold Flash or 15μ" Contact Area Gold 10u" Min |
| | Solder tab | 磷铜/Phosphor Bronze Nickel: Over 30μ" Min. Gold Flash |

(上述参数请以工程图为准/Please Refer to the Project drawing for the above Specification)

【4. 额定等级 Ratings and applicable wires】

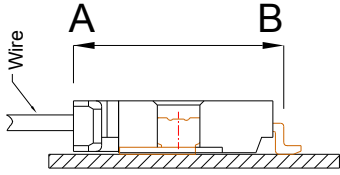
| 项目【Item】 | 规格【Standard】 | |
|-------------------------------------|--|---------|
| 额定电压 Rated Voltage (Max.) | 125V | [AC/DC] |
| 额定电流 Rated Current (Max.) | 1A | |
| 使用温度范围 Ambient temperature Range | -25℃~+85℃ | |
| 适用线径 Applicable wire insulation O.D | AWG 28#~32# Insulation O.D. 0.90mm(Max.) | |

【 *升温时含端子.Including terminal temperature rise. 】

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【5.性能 PERFORMANCE】

5-1. 电气的性能 Electrical Performance.

| 项目 【Item】 | 条 件 【Test Condition】 | 规 格 【Requirement】 |
|---|---|---|
| 5-1-1 接触阻抗 Contact Resistance | <p>公母配合,开放电压 20mV 以下,电流 10mA 检测连接器 A~B 区. Mate connectors, measure by dry circuit, 20mV MAX, 10mA. (Based upon EIA-364-06A).</p>  | <p>Initial: 20 milliohms Max. After Test: 40 milliohms Max.</p> |
| 5-1-2 绝缘阻抗 Insulation Resistance | <p>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. Mate connectors, apply 500V DC between adjacent terminal or ground. (Based upon EIA-364-21B / MIL-STD-202 Method 302 Cond.B)</p> | 100 Megohms Min. |
| 5-1-3 耐电压 Dielectric Strength | <p>公母配合,在相邻端子,端子与地片之间,使用 250V 的交流电 1 分钟,检测连接器. Mate connectors, apply 250V AC for 1 minute between adjacent terminal or ground. (Based upon EIA-364-20A / MIL-STD-202 Method 301)</p> | 不出现中断等情况 No Breakdown and Flashover |
| 5-1-4 铆线后端子接触阻抗 Contact resistance on crimped portion | <p>铆线后之端子,开放电压 20mV 以下,电流 10mA 检测连接器. Crimp the applicable wire on to the terminal measure by dry circuit 20mV MAX, 10mA.</p> | 10 milliohms Max. |

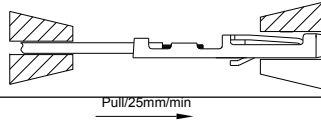
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5-2. 机械的性能 Mechanical Performance.

| 项目 【Item】 | | 条件 【Test Condition】 | 规格 【Requirement】 |
|--------------|--|---|---------------------------------|
| 5-2-1 | 插拔力 Insertion & Withdraw Force | <p>以每分钟 25.4±3mm 的速率插入和拔出。 Insert and withdraw Connectors at the speed rate of 25.4±3mm/minute.</p> | 参照第 6 项 Refer to paragraph 6 |
| 5-2-2 | 端子保持力 Terminal/Housing Retention Force | <p>以每分钟 25.4±3mm 的速率,将端子从 Housing 内轴向拔出的力量。 Apply axial pull out force at the speed rate of 25.4±3mm/minute on the terminal assembled in the housing.</p> | 4.90N {0.5kgf} Min. |
| 5-2-3 | 端子插入力 Terminal Insertion Force | <p>铆线后之端子插入 Housing 所需最大力量。 Insert the crimped terminal into the housing.</p> | 4.9N {0.5kgf} Max. |
| 5-2-4 | Pin 针保持力 Pin Retention Force | <p>以每分钟 25.4±3mm 的速率,将 PIN 针从 Wafer 内轴向拔出的力量。 Apply axial push force at the speed rate of 25.4±3mm/minute.</p> | 1.96N {0.20kgf} min. |

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| 项目 【Item】 | | 条件 【Test Condition】 | 规格 【Requirement】 | | | |
|--------------|---|--|--|-----|-----|-----|
| 5-2-5 | 端子压着强度 Tensile strength (Crimped connections) | 固定铆线后的端子, 使电线与端子分离时所需的最小力量。 Fix the crimped terminal, apply axial pull out force on the wire. (Do not crimp insulation part). | AWG# | #28 | #30 | #32 |
| | | | Spec.kgf. Min. | 1.0 | 0.5 | 0.3 |
| | | | Note> As for unspecified wire sizes in this specification define values with clients | | | |



5-3. 环境性能及其它 Environmental Performance and Others.

| 项目 【Item】 | | 条件 【Test Condition】 | 规格 【Requirement】 | |
|--------------|---------------------------------------|--|----------------------------|---------------------|
| 5-3-1 | 重复插拔 Repeated Insertion/Withdrawal | 以每分钟不超过 10 次的速率, 将公母插拔 30 次。 When mated up to 30 cycles repeatedly by the rate of 10 cycles per minute. | 接触阻抗 Contact Resistance | 40 milliohms Max. |
| 5-3-2 | 温升测试 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 (EIA364-70, Method 1) Mating connectors shall be energized at rating current until thermal stability is achieved, and then measured the temperature rise (EIA364-70, Method 1) | 温升测试 Temperature rise | 30°C Max. |
| 5-3-3 | 振动测试 Vibration test | 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 Amplitude: 1.5mm P-P Sweep time: 10~55~10 HZ in 1 minute Duration: 2 hours in each X.Y.Z axials. (Based upon EIA-364-28B/MIL-STD-202 Method 213B Cond.A) | 外观 Appearance | 无异状 No Damage |
| | | | 接触阻抗 Contact Resistance | 40 milliohms Max. |
| | | | 瞬断 Discontinuity | 1 micro-second Max. |
| 5-3-4 | 冲击测试 Shock test | 在 X.Y.Z 上 6 个方向上, 以 490m/s ² (50g 的力量) 冲击下各 3 回. 490m/s ² {50G}, 3 strokes in each X.Y.Z. axes. (Based upon EIA-364-27B/MIL-STD-202 Method 213B Cond.A) | 外观 Appearance | 无异状 No Damage |
| | | | 接触阻抗 Contact Resistance | 40 milliohms Max. |
| | | | 瞬断 Discontinuity | 1 micro-second Max. |



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| 5-3-5 | 耐热性 Heat Resistance | 85±2°C, 96 hours. (Based upon MIL-STD-202 Method 108A Cond.A) | 外观 Appearance | 无异状 No Damage |
| | | | 接触阻抗 Contact Resistance | 40 milliohms Max. |
| 5-3-6 | 耐寒性 Cold Resistance | -25±5°C, 96 hours. (Based upon EIA-364-105) | 外观 Appearance | 无异状 No Damage |
| | | | 接触阻抗 Contact Resistance | 40 milliohms Max. |
| 5-3-7 | 耐湿性 Humidity | 温度: 40±2°C 湿度: 90~95%(RH) 持续时间: 96 hours Temperature: 40±2°C Relative Humidity: 90~95% Duration: 96 hours (Based upon EIA-364-31A/MIL-STD-202 Method 103B Cond.B) | 外观 Appearance | 无异状 No Damage |
| | | | 接触阻抗 Contact Resistance | 40 milliohms Max. |
| | | | 耐电压 Dielectric Strength | Must meet 5-1-3 |
| 5-3-8 | 温度变化 Temperature Cycling | 从-25°C持续 30 分钟升至+85°C持续 30 分钟,循环 5 次. 5 cycles of: a) -25°C 30 minutes. b) +85°C 30 minutes. (Based upon EIA-364-32B) | 外观 Appearance | 无异状 No Damage |
| | | | 接触阻抗 Contact Resistance | 40 milliohms Max. |
| 5-3-9 | 盐水喷雾 Salt Spray | 在温度 35±2°C, 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°C. (Based upon EIA-364-26B/MIL-STD-202 Method 101D Cond.B). | 外观 Appearance | 无异状 No Damage |
| | | | 接触阻抗 Contact Resistance | 40 milliohms Max. |
| 5-3-10 | 焊锡附着性 Solder-ability | 焊接时间: 3~5 秒. 焊接温度: 245±5°C. Soldering Time: 3~5second. Solder Temperature: 245±5°C. (Based upon EIA-364-52) | Solder Wetting | 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】 | |
|--------------------------------------|--|---------------------|------------------|
| 5-3-11 焊锡耐热性 Solder-Resistance | 焊接时间: 5~10 秒. 焊接温度: 255+5/-5°C. Soldering time: 5~10 sec solder. Temperature: 255+5/-5°C. (Based upon EIA-364-56A) | 外观 Appearance | 无异状 No Damage |

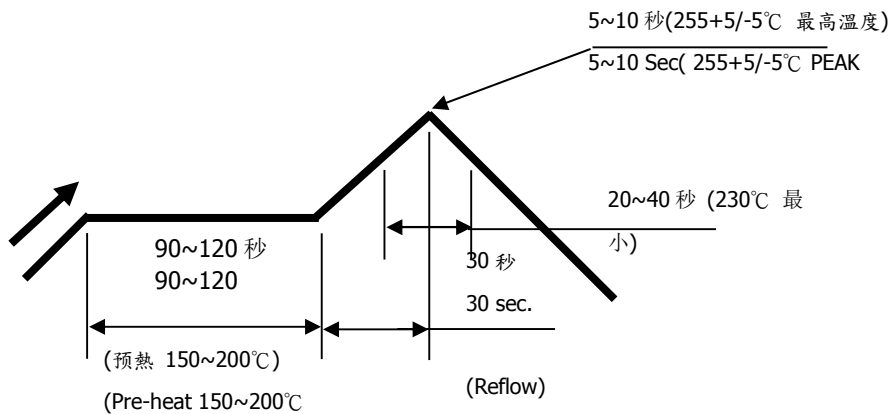
【6. 综合插入力及拔出力 INSERTION/WITHDRAWAL FORCE】 <Connector mating force>

| PIN 数 No. of CKT | 初次插入力(最大值) First Insertion (kgf Max.) | 30 次拔出力(最小值) 30 th Withdrawal (kgf Min.) | PIN 数 No. of CKT | 初次插入力(最大值) First Insertion (kgf Max.) | 30 次拔出力(最小值) 30 th Withdrawal (kgf Min.) |
|------------------------|---|---|------------------------|---|---|
| 2 | 0.45 | 0.05 | 10 | 2.20 | 0.20 |
| 3 | 0.65 | 0.06 | 11 | 2.40 | 0.22 |
| 4 | 0.90 | 0.08 | 12 | 2.65 | 0.24 |
| 5 | 1.10 | 0.10 | 13 | 2.85 | 0.26 |
| 6 | 1.30 | 0.12 | 14 | 3.10 | 0.28 |
| 7 | 1.55 | 0.14 | 15 | 3.30 | 0.30 |
| 8 | 1.75 | 0.16 | 20 | 4.40 | 0.40 |
| 9 | 2.00 | 0.18 | 30 | 6.60 | 0.60 |

注: 以上插拔次数为 30 次

Note: Insertion and Withdrawal for 30Cycles

【7. SMT 回流条件 SMT REFLOW CONDITION】



温度条件曲线图/ 基板上温度

TEMPERATURE CONDITION GRAPH/ (TEMPERATURE ON BOARD PATTERN SIDE)

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。

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.