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| <b>Product Specification [产品规格书]:</b>                                     | Document No  | PS-A1255-01 |
| <b>Subject [主题]:</b><br>1.25mm Pitch A1255 Series Connector Specification | Date Issued  | 2010/11/13  |
|                                                                           | Date Revised | 2020/05/13  |
|                                                                           | 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 A1255 Series 连接器规格说明.

This Specification Covers the 1.25mm Pitch A1255 Series Connector Specification.

**【2.规格与料号 Spec and Part number】**

| 规格内容<br>Specification | 产品料号<br>Production No.                  | 产品图示<br>Picture of Product |
|-----------------------|-----------------------------------------|----------------------------|
| 端子/Terminal           | A1255T-XXX                              |                            |
| 胶壳/Housing            | A1255H-1*XXX-N0XX<br>A1255H-XXX-N0XX    |                            |
| 针座/Wafer              | A1255WRS-1*XXX-XXXX<br>A1255WRS-XX-XXXX |                            |

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

| 规格内容<br>Specification | 材质<br>Materials           | 表面处理<br>Disposal of Surface                                                                |
|-----------------------|---------------------------|--------------------------------------------------------------------------------------------|
| 端子/Terminal           | 磷铜(C5191)/Phosphor Bronze | 1. Nickel: Over 30μ" . Tin: Over 70μ" .<br>2. Gold- Plated: 1~3u" Nickel: Over 30μ"        |
| 胶壳/Housing            | PA66                      | UL 94V-0                                                                                   |
| 针座/Wafer              | Base                      | High Temperature Plastic<br>UL 94V-0                                                       |
|                       | PIN                       | 黄铜(C2680)/Brass<br>1. Gold Flash / Over 30μ" Nickel<br>2. Over Tin 70μ" / Over 30μ" Nickel |
|                       | Solder tab                | 黄铜(C2680)/Brass<br>Over Tin 70μ" Plated / Over 30μ" Nickel                                 |

(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】**

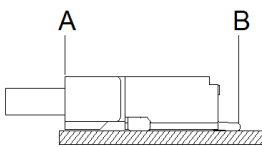
| 项目【Item】                            | 规格【Standard】                            |         |
|-------------------------------------|-----------------------------------------|---------|
| 额定电压 Rated Voltage (Max.)           | 200V                                    | [AC/DC] |
| 额定电流 Rated Current (Max.)           | 1A                                      |         |
| 使用温度范围 Ambient temperature Range    | -40℃~+105℃                              |         |
| 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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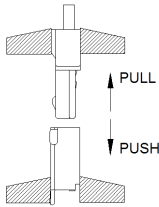
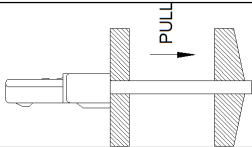
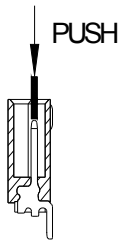
**【5.性能 PERFORMANCE】**

**5-1. 电气的性能 Electrical Performance.**

| 项 目<br>【Item】                                                      | 条 件<br>【Test Condition】                                                                                                                                                                                               | 规 格<br>【Requirement】                                              |
|--------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 5-1-1<br>接触阻抗<br>Contact Resistance                                | 公母配合,开放电压 20mV 以下,电流 10mA 检测连接器 A~B 区.<br>Mate connectors, measure by dry circuit, 20mV MAX, 10mA.<br>(Based upon EIA-364-06A).<br> | Initial:<br>40 milliohms Max.<br>After Test:<br>80 milliohms Max. |
| 5-1-2<br>绝缘阻抗<br>Insulation Resistance                             | 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.<br>Mate connectors, apply 500V DC between adjacent terminal or ground.<br>(Based upon EIA-364-21B / MIL-STD-202 Method 302 Cond.B)                                             | 100 Megohms Min.                                                  |
| 5-1-3<br>耐电压<br>Dielectric Strength                                | 公母配合,在相邻端子,端子与地片之间,使用 500V 的交流电 1 分钟,检测连接器.<br>Mate connectors, apply 500V AC for 1 minute between adjacent terminal or ground.<br>(Based upon EIA-364-20A / MIL-STD-202 Method 301)                                  | 不出现中断等情况<br>No Breakdown and Flashover                            |
| 5-1-4<br>铆线后端子接触<br>阻抗 Contact<br>resistance on<br>crimped portion | 铆线后之端子,开放电压 20mV 以下,电流 10mA 检测连接器.<br>Crimp the applicable wire on to the terminal measure by dry circuit 20mV MAX, 10mA.                                                                                             | 10 milliohms Max.                                                 |

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**5-2. 机械的性能 Mechanical Performance.**

| 项目<br>【Item】 |                                        | 条件<br>【Test Condition】                                                                                                                                                                                                                           | 规格<br>【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。<br/>Insert and withdraw Connectors at the speed rate of 25.4±3mm/minute.</p>                                                         | 参照第 6 项<br>Refer to paragraph 6 |
| 5-2-2        | 端子保持力 Terminal/Housing Retention Force | <p>以每分 25.4±3mm 的速率,将端子从 Housing 内轴向拔出的力量。<br/>Apply axial pull out force at the speed rate of 25.4±3mm/minute on the terminal assembled in the housing.</p>  | 4.9N {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。<br/>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 25.4±3mm 的速率,将 PIN 针从 Wafer 内轴向拔出的力量。<br/>Apply axial push force at the speed rate of 25.4±3mm/minute.</p>                                             | 2.94N {0.30kgf} min.            |

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| 项目<br>【Item】 |                                                     | 条件<br>【Test Condition】                                                                                                           | 规格<br>【Requirement】                                                                  |     |     |     |
|--------------|-----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-----|-----|-----|
| 5-2-5        | 端子压着强度<br>Tensile strength<br>(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.<br>Fix the crimped terminal, apply axial pull out force on the wire. (Do not crimp insulation part). | AWG#                                                                                 | #28 | #30 | #32 |
|              |                                                     |                                                                                                                                  | Spec.kgf.<br>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<br>【Item】 |                                           | 条件<br>【Test Condition】                                                                                                                                                                                                           | 规格<br>【Requirement】        |                     |
|--------------|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|---------------------|
| 5-3-1        | 重复插拔<br>Repeated Insertion/<br>Withdrawal | 以每分钟不超过 10 次的速率,将公母插拔 30 次.<br>When mated up to 30 cycles repeatedly by the rate of 10 cycles per minute.                                                                                                                        | 接触阻抗<br>Contact Resistance | 80 milliohms Max.   |
| 5-3-2        | 温升测试<br>Temperature Rise                  | 温升测试: 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)<br>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<br>Temperature rise   | 30°C Max.           |
| 5-3-3        | 振动测试<br>Vibration test                    | 振幅: 1.5mm P-P<br>时间: 10~55~10 HZ in 1 minute<br>持续时间: 每轴向 2 小时<br>Amplitude: 1.5mm P-P<br>Sweep time: 10~55~10 HZ in 1 minute<br>Duration: 2 hours in each X.Y.Z axials. (Based upon EIA-364-28B/MIL-STD-202 Method 213B Cond.A) | 外观<br>Appearance           | 无异状<br>No Damage    |
|              |                                           |                                                                                                                                                                                                                                  | 接触阻抗<br>Contact Resistance | 80 milliohms Max.   |
|              |                                           |                                                                                                                                                                                                                                  | 瞬断<br>Discontinuity        | 1 micro-second Max. |
| 5-3-4        | 冲击测试<br>Shock test                        | 在 X.Y.Z 上 6 个方向上,以 490m/s <sup>2</sup> (50g 的力量)冲击下各 3 回.490m/s <sup>2</sup> {50G}, 3 strokes in each X.Y.Z. axes.<br>(Based upon EIA-364-27B/MIL-STD-202 Method 213B Cond.A)                                                    | 外观<br>Appearance           | 无异状<br>No Damage    |
|              |                                           |                                                                                                                                                                                                                                  | 接触阻抗<br>Contact Resistance | 80 milliohms Max.   |
|              |                                           |                                                                                                                                                                                                                                  | 瞬断<br>Discontinuity        | 1 micro-second Max. |



|                                                                           |                             |                                                                                                                                                                                   |                               |                                                                                |
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|                                                                           |                             |                                                                                                                                                                                   | <b>Date Revised</b>           | <b>2020/05/13</b>                                                              |
|                                                                           |                             |                                                                                                                                                                                   | <b>Version</b>                | <b>A</b>                                                                       |
| 5-3-5                                                                     | 耐热性<br>Heat Resistance      | 105±2℃,96 hours.<br>(Based upon MIL-STD-202 Method 108A Cond.A)                                                                                                                   | 外观<br>Appearance              | 无异状<br>No Damage                                                               |
|                                                                           |                             |                                                                                                                                                                                   | 接触阻抗<br>Contact Resistance    | 80 milliohms<br>Max.                                                           |
| 5-3-6                                                                     | 耐寒性<br>Cold Resistance      | -40±5℃,96 hours.<br>( Based upon EIA-364-105)                                                                                                                                     | 外观<br>Appearance              | 无异状<br>No Damage                                                               |
|                                                                           |                             |                                                                                                                                                                                   | 接触阻抗<br>Contact Resistance    | 80 milliohms<br>Max.                                                           |
| 5-3-7                                                                     | 耐湿性<br>Humidity             | 温度: 40±2℃<br>湿度: 90~95%(RH)<br>持续时间: 96 hours<br>Temperature: 40±2℃<br>Relative Humidity: 90~95%<br>Duration: 96 hours<br>(Based upon EIA-364-31A/MIL-STD-202 Method 103B Cond.B) | 外观<br>Appearance              | 无异状<br>No Damage                                                               |
|                                                                           |                             |                                                                                                                                                                                   | 接触阻抗<br>Contact Resistance    | 80 milliohms<br>Max.                                                           |
|                                                                           |                             |                                                                                                                                                                                   | 耐电压<br>Dielectric Strength    | Must meet<br>5-1-3                                                             |
|                                                                           |                             |                                                                                                                                                                                   | 绝缘阻抗<br>Insulation Resistance | 100 Megohms<br>Min.                                                            |
| 5-3-8                                                                     | 温度变化<br>Temperature Cycling | 从-40℃持续 30 分钟升至+105℃持续 30 分钟,<br>循环 5 次.<br>5 cycles of: a) -40℃ 30 minutes.<br>b) +105℃ 30 minutes.<br>(Based upon EIA-364-32B)                                                  | 外观<br>Appearance              | 无异状<br>No Damage                                                               |
|                                                                           |                             |                                                                                                                                                                                   | 接触阻抗<br>Contact Resistance    | 80 milliohms<br>Max.                                                           |
| 5-3-9                                                                     | 盐水喷雾<br>Salt Spray          | 在温度 35±2℃, 盐水浓度 5±1% 下, 盐水喷雾<br>24±1 小时.<br>24±1 hours exposure to a salt spray from the<br>5±1% solution at 35±2℃.<br>(Based upon EIA-364-26B/MIL-STD-202 Method 101D Cond.B).   | 外观<br>Appearance              | 无异状<br>No Damage                                                               |
|                                                                           |                             |                                                                                                                                                                                   | 接触阻抗<br>Contact Resistance    | 80 milliohms<br>Max.                                                           |
| 5-3-10                                                                    | 焊锡附着性<br>Solder-ability     | 焊接时间:3~5 秒.<br>焊接温度: 245±5℃.<br>Soldering Time: 3~5 second.<br>Solder Temperature: 245±5℃.<br>(Based upon EIA-364-52)                                                             | Solder Wetting                | 浸渍面积需<br>95%以上<br>95% of<br>immersed area<br>must show no<br>voids, pin holes. |
| <b>WRITTEN BY:LTS</b>                                                     |                             |                                                                                                                                                                                   | <b>APPROVED BY:YJY</b>        |                                                                                |
|                                                                           |                             |                                                                                                                                                                                   | <b>Sheet: 6 of 7</b>          |                                                                                |

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1.25mm Pitch A1255 Series Connector Specification

| 项目<br>【Item】                         | 条件<br>【Test Condition】                                                                                                         | 规格<br>【Requirement】 |                  |
|--------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|---------------------|------------------|
| 5-3-11<br>焊锡耐热性<br>Solder-Resistance | 焊接时间: 5~10 秒.<br>焊接温度: 255+5/-5°C.<br>Soldering time: 5~10 sec solder.<br>Temperature: 255+5/-5°C.<br>(Based upon EIA-364-56A) | 外观<br>Appearance    | 无异状<br>No Damage |

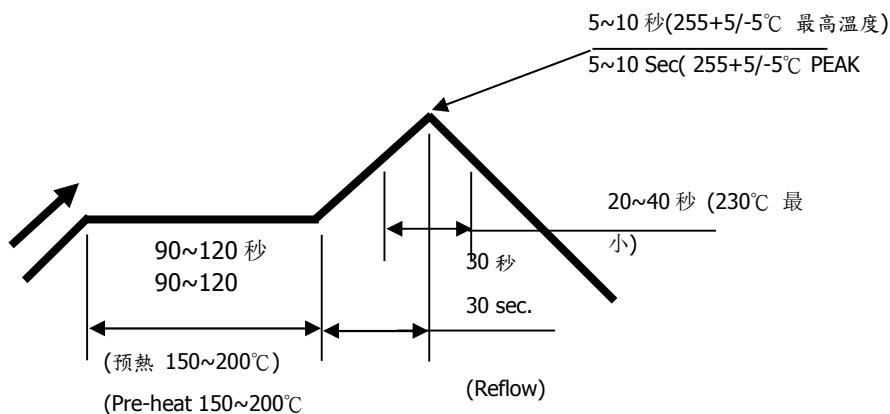
**【6.综合插入力及拔出力 INSERTION/WITHDRAWAL FORCE】 <Connector mating force>**

| PIN 数<br>No. of<br>CKT | 初次插入力(最大值)<br>First Insertion<br>(kgf Max.) | 30 次拔出力(最小值)<br>30 <sup>th</sup> Withdrawal<br>(kgf Min.) | PIN 数<br>No. of<br>CKT | 初次插入力(最大值)<br>First Insertion<br>(kgf Max.) | 30 次拔出力(最小值)<br>30 <sup>th</sup> Withdrawal<br>(kgf Min.) |
|------------------------|---------------------------------------------|-----------------------------------------------------------|------------------------|---------------------------------------------|-----------------------------------------------------------|
| 2                      | 0.4                                         | 0.08                                                      | 9                      | 1.8                                         | 0.36                                                      |
| 3                      | 0.6                                         | 0.12                                                      | 10                     | 2.0                                         | 0.4                                                       |
| 4                      | 0.8                                         | 0.16                                                      | 20                     | 4.0                                         | 0.8                                                       |
| 5                      | 1.0                                         | 0.20                                                      | 21                     | 4.2                                         | 0.84                                                      |
| 6                      | 1.2                                         | 0.24                                                      | 30                     | 6.0                                         | 1.20                                                      |
| 7                      | 1.4                                         | 0.28                                                      | 41                     | 8.2                                         | 1.64                                                      |
| 8                      | 1.6                                         | 0.32                                                      | 51                     | 10.2                                        | 2.04                                                      |

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.