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# 产品规格书 PRODUCT SPECIFICATION

This specification is referred to the 3.00mm series wire to board connector

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#### 【1.适用范围 Scope】

此种规格包括 3.00mm Pitch 3025/20 Series 连接器规格说明
This Specification Covers the 3.00mm Pitch 3025 /20 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           | T3025PS-2<br>T3020PS-2   | NONE                       |
| 胶壳/Housing            | P3025-XX-XXX P3020-XX-XXX<br>P3025-2*XX-XXX<br>P3020-2*XX-XXX        | NONE                       |
| 针座/Wafer              | M3025V-XX-XXX<br>M3025R-XX-XXX<br>M3025V-2*XX-XXX<br>M3025R-2*XX-XXX | NONE                       |

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

| 规格内容             |      | 材 质                | 表面处理                                      |
|------------------|------|--------------------|---|
| Specification    |      | Materials          | Disposal of Surface                       |
| 端子/Terminal      |      | 磷铜/Phosphor Bronze | Tin Plated: Over 70μ″. Nickel: Over 30μ″. |
| 胶壳/Housing       |      | PA66               | UL 94V-2/UL94V-0                          |
| 红 () () () () () | Base | PA66               | UL 94V-2/UL94V-0                          |
| 针座/Wafer         | PIN  | 黄铜/Brass           | 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.)           | 250V               |                         |
|                                     | AWG#20 5A          | [AC/DC]                 |
| 额定电流 Rated Current (Max.)           | AWG#22 5A          | [AGDC]                  |
|                                     | AWG#24 4A          |                         |
| 使用温度范围 Ambient temperature Range    | -40 °C             | ~+85℃                   |
| 适用线径 Applicable wire insulation O.D | AWG 20#~24# Insula | ation O.D. 1.85mm(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 条 件 规 格   |  |   |  |  |
|-------|---|--|---|--|--|
|       | [Item]  | 【Test Condition】   | 【Requirement】   |  |  |
| 5-1-1 | 接触阻抗<br>Contact<br>Resistance                                   | 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).  | Initial:<br>10 milliohms Max.<br>After Test:<br>20 milliohms Max. |  |  |
| 5-1-2 | 绝缘阻抗<br>Insulation<br>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)                  | 1000 Megohms Min.   |  |  |
| 5-1-3 | 耐电压<br>Dielectric<br>Strength                                   | 公母配合,在相邻端子,端子与地片之间,使用1000V的交流电1分锺,检测连接器.<br>Mate connectors, apply 1000V AC for 1 minute<br>between adjacent terminal or ground.<br>(Based upon EIA-364-20A / MIL-STD-202<br>Method 301) | 不出现中断等情况<br>No Breakdown<br>and Flashover                         |  |  |
| 5-1-4 | 铆线后端子接<br>触阻抗<br>Contact<br>resistance on<br>crimped<br>portion | 铆线后之端子,开放电压 20mV 以下,电流 10mA<br>检测连接器.<br>Crimp the applicable wire on to the terminal<br>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 条 件 规 格 【Test Condition】 【Requirement】          |   |                     |  |  |
|-------|---|---|---------------------|--|--|
| 5-2-1 | 插拔力<br>Insertion<br>& Retention<br>Force            | 以每分锺 25.4±3mm 的速率插入和拔出. Insert and withdraw Connectors at the speed rate of 25.4±3mm/minute.  | <u>.</u>            |  |  |
| 5-2-2 | 端子保持力<br>Terminal/<br>Housing<br>Retention<br>Force | 以每分 25.4±3mm 的速率,将端子从<br>Housing 内轴向拔出的力量.<br>Apply axial pull out force at the speed<br>rate of 25.4±3mm/minute on the<br>terminal assembled in the housing. | 24.5N {2.5kgf} Min. |  |  |
| 5-2-3 | 端子插入力<br>Terminal<br>Insertion<br>Force             | 铆线后之端子插入 Housing 所需最大力量. Insert the crimped terminal into the housing.  | 14.7N {1.5kgf} Max. |  |  |
| 5-2-4 | Pin<br>针保持力<br>Pin Retention<br>Force               | 以每分 25.4±3mm 的速率,将 PIN 针从 Wafer 内轴向拨出的力量. Apply axial push force at the speed rate of 25.4±3mm/minute.  | 13.7N {1.4kgf} min. |  |  |

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|       | 项目                    | 条件  |                        | 规       | 格                                  |       |  |  |  |
|-------|-----------------------|---|------------------------|---------|------------------------------------|-------|--|--|--|
|       | 【Item】                | 【Test Condition】  |                        | Requir  | ement                              |       |  |  |  |
|       |                       | 固定铆线后的端子,使电线与端子分离时所   | AWG#                   | #20     | #22                                | #24   |  |  |  |
| F 2 F |                       | 需的最小力量. Fix the crimped terminal, apply axial pull out force on the wire. (Do not crimp insulation part). | Spec.<br>.kgf.<br>Min. | 6.0     | 4.0                                | 2.0   |  |  |  |
| 5-2-5 | (Crimped connections) | Section Wiles   |                        | in this | nspecifi<br>specifica<br>s with cl | ation |  |  |  |

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

| 【Item】 |  | 不<br>【Test Condition】  | - 7%<br>【Require              |                         |
|--------|--|--|-------------------------------|-------------------------|
| 5-3-1  | 重复插拔<br>Repeated<br>Insertion/<br>Withdrawal | 以每分锺不超过 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<br>Contact               | 20 milliohms<br>Max.    |
| 5-3-2  | 温升测试<br>Temperature<br>Rise                  | 公母对插后,在通过额定电流下,所测定的<br>温度.<br>Carrying rated current load. (UL 1977)   | 温升测试<br>Temperature<br>rise   | 30℃ Max.                |
|        | 振幅: 1.5mm P-P<br>时间: 10~55~10 HZ in 1 minute |  | 外观<br>Appearance              | 无异状<br>No Damage        |
| 5-3-3  | 耐振动性<br>Vibration                            | 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. | 接触阻抗<br>Contact<br>Resistance | 20 milliohms<br>Max.    |
|        |  | (Based upon EIA-364-28B/MIL-STD-202<br>Method 213B Cond.A)   | 瞬断<br>Discontinuity           | 1 micro-<br>second Max. |
|        |  | 在 X.Y.Z 上 6 个方向上,以 490m/s <sup>2</sup> (50g 的  | 外观<br>Appearance              | 无异状<br>No Damage        |
| 5-3-4  | Shock  | 力量)冲击下各 3 回.490m/s <sup>2</sup> {50G}, 3 strokes in each X.Y.Z. axes.  | 接触阻抗<br>Contact<br>Resistance | 20 milliohms<br>Max.    |
|        |  | (Based upon EIA-364-27B/MIL-STD-202<br>Method 213B Cond.A)   | 瞬断<br>Discontinuity           | 1 micro-<br>second Max. |

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|                    | 项 目                    | 条件   | 规                                | 格                        |
|--------------------|------------------------|--|----------------------------------|--------------------------|
| 【Item】             |                        | 【Test Condition】   | 【Requirement】                    |                          |
|                    | 耐热性                    | 85±2 ℃ ,96 hours.  | 外观<br>Appearance                 | 无异状<br>No Damage         |
| 5-3-5 Heat Resista |                        | (Based upon MIL-STD-202 Method 108A Cond.A)  | 接触阻抗<br>Contact<br>Resistance    | 20 milliohms<br>Max.     |
| 5-3-6              | 耐寒性                    | 性 -25±5℃,96 hours.<br>sistance ( Based upon EIA-364-105)   | 外观<br>Appearance<br>接触阻抗         | 无异状<br>No Damage         |
|                    | Cold Resistance        |  | Contact<br>Resistance            | 20 milliohms<br>Max.     |
|                    | 耐湿性<br>Humidity        | 温度: 40±2℃<br>湿度: 90~95%(RH)  | 外观<br>Appearance<br>接触阻抗         | 无异状<br>No Damage         |
| 5-3-7              |                        | 持续时间: 96 hours<br>Temperature: 40±2℃   | Contact<br>Resistance            | 20 milliohms<br>Max.     |
| 5-3-/              |                        | Relative Humidity: 90~95%  Duration: 96 hours  | 耐电压<br>Dielectric<br>Strength    | Must meet<br>5-1-3       |
|                    |                        | (Based upon EIA-364-31A/MIL-STD-202<br>Method 103B Cond.B)   | 绝缘阻抗<br>Insulation<br>Resistance | 500 Megohms<br>Min.      |
|                    |                        | 从-55℃持续 30 分锺升至+85℃持续 30 分锺,<br>循环 5 次.  | 外观<br>Appearance                 | 无异状<br>No Damage         |
| 5-3-8              | Temperature<br>Cycling | 5 cycles of: a) -55 ℃ 30 minutes.<br>b) +85 ℃ 30 minutes.<br>(Based upon EIA-364-32B)  | 接触阻抗<br>Contact<br>Resistance    | 20 milliohms<br>Max.     |
| F 2 0              | 盐水喷雾                   | 在温度 $35\pm2$ °, 盐水浓度 $5\pm1$ %下, 盐水喷雾 $24\pm1$ 小时.   24 $\pm1$ hours exposure to a salt spray from the $5\pm1$ % solution at $35\pm2$ °. | 外观<br>Appearance                 | 无异状<br>No Damage         |
| 5-3-9              | Salt Spray             | the 5±1% solution at 35±2 & .<br>(Based upon EIA-364-26A/MIL-STD-202<br>Method 101D Cond.B).<br>注:此项测试只针对先冲后镀端子                          | 接触阻抗<br>Contact<br>Resistance    | 20 milliohms<br>Max.     |
| 5-3-10             | 焊锡附着性                  | 焊接时间: 3±0.5 秒.<br>焊接温度: 245±5℃.  |                                  | 浸渍面积需<br>95%以上<br>95% of |
|                    |                        | Soldering Time: 3±0.5second.   | Solder Wetting                   | immersed area            |
|                    |                        | Solder Temperature: $245\pm5$ $^{\circ}$ .   | Solder Wetting                   | must show no             |
|                    |                        | (Based upon EIA-364-52)  |                                  | voids, pin               |
|                    |                        | (  |                                  | holes.                   |

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|                              | 页 目<br>Item】                      | 条 件<br>【Test Condition】  | 规<br>【Require    | 格<br>ement】 |
|------------------------------|-----------------------------------|--------------------------|------------------|-------------|
|                              |                                   | 焊接时间: 3~5 秒.             |                  |             |
|                              | <br>  焊锡耐热性                       | 焊接温度: 250+5/-5℃.         |                  |             |
| 5-3-11 Solder-<br>Resistance | Soldering time:3~5 sec solder.    | 外观<br>Appearance         | 无异状<br>No Damage |             |
|                              | Temperature:250+5/-5 $^{\circ}$ . | престапсе                | no bamage        |             |
|                              |                                   | (Based upon EIA-364-56A) |                  |             |

## 【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 |      | 30 次拔出力(最小值)<br>30 <sup>th</sup> Withdrawal<br>(kgf Min.) |
|------------------------|---|---|------------------------|------|---|
| Single                 | 1.0   | 0.35  | 7                      | 5.6  | 1.75  |
| 2                      | 1.6   | 0.50  | 8                      | 6.4  | 2.00  |
| 3                      | 2.4   | 0.75  | 9                      | 7.2  | 2.25  |
| 4                      | 3.2   | 1.00  | 10                     | 8.0  | 2.50  |
| 5                      | 4.0   | 1.25  | 11                     | 8.8  | 2.75  |
| 6                      | 4.8   | 1.50  | 12                     | 9.6  | 3.00  |
|                        |   | 双排(DOUB   | LE RO\                 | N)   |   |
| 2*02                   | 3.2   | 1.00  | 2*08                   | 12.8 | 4.00  |
| 2*03                   | 4.8   | 1.50  | 2*09                   | 14.4 | 4.50  |
| 2*04                   | 6.4   | 2.00  | 2*10                   | 16.0 | 5.00  |
| 2*05                   | 8.0   | 2.50  | 2*11                   | 17.6 | 5.50  |
| 2*06                   | 9.6   | 3.00  | 2*12                   | 19.2 | 6.00  |
| 2*07                   | 11.2  | 3.50  |                        |      |   |
| * 1. I. I.             | 1十十八十十十 00 1                                |   |                        |      |   |

注:以上插拔次数为 30 次 Note: Insertion and Withdrawal for 30Cycles

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