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|---------------------------------------|-----------------------------|------------|
| <b>Product Specification</b> [产品规格书]: | ISSUED BY: Engineering Dept |            |
|                                       | Date Issued                 | 2018/03/21 |
|                                       | Date Revised                | 2018/03/21 |

**Subject** [主题]:

0.60mm Pitch 0600 Series Connector Specification

This specification is referred to the 0.60mm series IDC connector

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|                                                                          |                             |            |
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### 【1.适用范围 Scope】

此种规格包括 0.60mm Pitch 0600 Series 连接器规格说明.

This Specification Covers the 0.60mm Pitch 0600 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                                                           |
|-----------------------|------------------------|--------------------------------------------------------------------------------------|
| 胶壳/Housing            | 0600HI-XX-XXXX         |  |
| 针座/Wafer              | 0600WRS-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/Phosphor Bronze | Tin Plated: Over 70μ" .Nickel: Over 30μ"<br>Gold Plated : Gold Flash" ~3μ" . Nickel : over 30μ" |
| 胶壳/Housing            | LCP                | UL 94V-0                                                                                        |
| 针座/Wafer              | Base               | LCP                                                                                             |
|                       | PIN                | 磷铜/Phosphor Bronze                                                                              |
|                       | Solder tab         | 黄铜/Brass                                                                                        |
|                       |                    | Tin Plated: Over 70μ" .Nickel: Over 30μ"<br>Gold Plated : Gold Flash" ~3μ" . Nickel : over 30μ" |

(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】

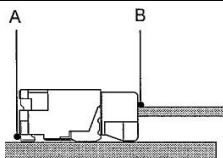
| 项 目【Item】                           | 规 格【Standard】                              |         |
|-------------------------------------|--------------------------------------------|---------|
| 额定电压 Rated Voltage (Max.)           | 30V                                        | [AC/DC] |
| 额定电流 Rated Current (Max.)           | 0.2A                                       |         |
| 使用温度范围 Ambient temperature Range    | -25℃~+85℃                                  |         |
| 适用线径 Applicable wire insulation O.D | AWG 34~36#    Insulation O.D. 0.29mm(Max.) |         |

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

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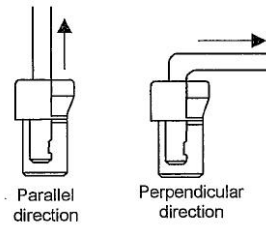
## 【5.性能 PERFORMANCE】

### 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         | 接触阻抗<br>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.<br/>Mate connectors, measure by dry circuit, 20mV MAX, 10mA.<br/>(Based upon EIA-364-06A).</p>  | <p>Initial:<br/>30 milliohms Max.<br/>After Test:<br/>50 milliohms Max.</p> |
| 5-1-2         | 绝缘阻抗<br>Insulation Resistance                      | <p>公母配合,在相邻端子,端子与地片之间,使用 100V 的直流电,检测连接器.<br/>Mate connectors, apply 100V DC between adjacent terminal or ground.<br/>(Based upon EIA-364-21B / MIL-STD-202 Method 302 Cond.B)</p>                                         | 100 Megohms Min.                                                            |
| 5-1-3         | 耐电压<br>Dielectric Strength                         | <p>公母配合,在相邻端子,端子与地片之间,使用 200V 的交流电 1 分钟,检测连接器.<br/>Mate connectors, apply 200V AC for 1 minute between adjacent terminal or ground.<br/>(Based upon EIA-364-20A / MIL-STD-202 Method 301)</p>                              | <p>不出现中断等情况<br/>No Breakdown and Flashover</p>                              |
| 5-1-4         | 铆线后端子接触阻抗<br>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.<br/>Crimp the applicable wire on to the terminal measure by dry circuit 20mV MAX, 10mA.</p>                                                                                          | 20 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<br>Insertion<br>& Retention<br>Force | 以每分钟 $25.4 \pm 3\text{mm}$ 的速率插入和拔出。<br>Insert and withdraw Connectors at the speed rate of $25.4 \pm 3\text{mm/minute}$ .                                           | 参照第 6 项<br>Refer to paragraph 6 |                             |
| 5-2-2         | 线材保持力<br>Wire<br>Retention<br>Force      | 以每分 $25 \pm 3\text{mm}$ 的速率,将线材从 Housing 拔出的力量。<br>Apply axial pull out force at the speed rate of $25 \pm 3\text{mm/minute}$ on the Pull Out Force Axial direction. | 平行方向<br>parallel                | 垂直方向<br>perpendicular       |
|               |                                          |  <p>Parallel direction      Perpendicular direction</p>                           | 3N {0.30kgf} Min.<br>AWG#36     | 1N {0.10kgf} Min.<br>AWG#36 |
| 5-2-3         | Pin<br>针保持力<br>Pin Retention<br>Force    | 以每分 $25.4 \pm 3\text{mm}$ 的速率,将单 PIN 针从 Wafer 内轴向推出的力量。<br>Apply axial push force at the speed rate of $25.4 \pm 3\text{mm/minute}$ .                                | 1.47N {0.15kgf} Min.            |                             |

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### 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 | 50 milliohms Max.   |
| 5-3-2         | 温升测试<br>Temperature Rise                  | 公母对插后,在通过额定电流下,所测定的温度.<br>Carrying rated current load. (UL 1977)                                                                                                                                                                    | 温升测试<br>Temperature rise   | 30℃ Max.            |
| 5-3-3         | 耐振动性<br>Vibration                         | 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.<br>(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 | 50 milliohms Max.   |
|               |                                           |                                                                                                                                                                                                                                     | 瞬断<br>Discontinuity        | 1 micro-second Max. |
| 5-3-4         | 耐冲击性<br>Shock                             | 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 | 50 milliohms Max.   |
|               |                                           |                                                                                                                                                                                                                                     | 瞬断<br>Discontinuity        | 1 micro-second Max. |
| 5-3-5         | 耐热性<br>Heat Resistance                    | 85±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 | 50 milliohms Max.   |
| 5-3-6         | 耐寒性<br>Cold Resistance                    | -25±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 | 50 milliohms Max.   |

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| 项 目<br>【Item】 |                             | 条 件<br>【Test Condition】                                                                                                                                                                                                        | 规 格<br>【Requirement】          |                                                                    |
|---------------|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|--------------------------------------------------------------------|
| 5-3-7         | 耐湿性<br>Humidity             | 温度: $40\pm 2^{\circ}\text{C}$<br>湿度: 90~95%(RH)<br>持续时间: 96 hours<br>Temperature: $40\pm 2^{\circ}\text{C}$<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    | 50 milliohms Max.                                                  |
|               |                             |                                                                                                                                                                                                                                | 耐电压<br>Dielectric Strength    | Must meet 5-1-3                                                    |
|               |                             |                                                                                                                                                                                                                                | 绝缘阻抗<br>Insulation Resistance | 50 Megohms Min.                                                    |
| 5-3-8         | 温度变化<br>Temperature Cycling | 从 $-25^{\circ}\text{C}$ 持续 30 分锺升至 $+85^{\circ}\text{C}$ 持续 30 分锺,循环 5 次.<br>5 cycles of: a) $-25^{\circ}\text{C}$ 30 minutes.<br>b) $+85^{\circ}\text{C}$ 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    | 50 milliohms Max.                                                  |
| 5-3-9         | 盐水喷雾<br>Salt Spray          | 在温度 $35\pm 2^{\circ}\text{C}$ , 盐水浓度 $5\pm 1\%$ 下, 盐水喷雾 $24\pm 1$ 小时.<br>24±1 hours exposure to a salt spray from the 5±1% solution at $35\pm 2^{\circ}\text{C}$ .<br>(Based upon EIA-364-26A/MIL-STD-202 Method 101D Cond.B). | 外观<br>Appearance              | 无异状<br>No Damage                                                   |
|               |                             |                                                                                                                                                                                                                                | 接触阻抗<br>Contact Resistance    | 50 milliohms Max.                                                  |
| 5-3-10        | 焊锡附着性<br>Solder-ability     | 焊接时间: $3\pm 0.5$ 秒.<br>焊接温度: $245\pm 5^{\circ}\text{C}$ .<br>Soldering Time: $3\pm 0.5\text{second}$ .<br>Solder Temperature: $245\pm 5^{\circ}\text{C}$ .<br>(Based upon EIA-364-52)                                          | Solder Wetting                | 浸渍面积需 95%以上<br>95% of immersed area must show no voids, pin holes. |
| 5-3-11        | 焊锡耐热性<br>Solder-Resistance  | 焊接时间: 5~10 秒.<br>焊接温度: $250+5/-0^{\circ}\text{C}$ .<br>Soldering time: 5~10 sec solder.<br>Temperature: $250+5/-0^{\circ}\text{C}$ .<br>(Based upon EIA-364-56A)                                                               | 外观<br>Appearance              | 无异状<br>No Damage                                                   |



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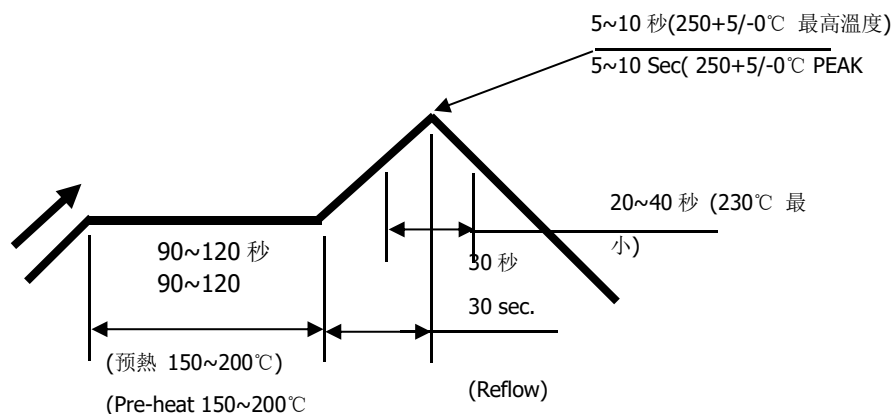
**【6.综合插入力及拔出力 INSERTION/WITHDRAWAL FORCE】 <Connector mating force>**

| PIN 数<br>No. of CKT | 初次插入力(最大值)<br>First Insertion (kgf Max.) | 30 次拔出力(最小值)<br>30 <sup>th</sup> Withdrawal (kgf Min.) | PIN 数<br>No. of CKT | 初次插入力(最大值)<br>First Insertion (kgf Max.) | 30 次拔出力(最小值)<br>30 <sup>th</sup> Withdrawal (kgf Min.) |
|---------------------|------------------------------------------|--------------------------------------------------------|---------------------|------------------------------------------|--------------------------------------------------------|
| 02                  | 1.0                                      | 0.05                                                   | 09                  | 1.7                                      | 0.20                                                   |
| 03                  | 1.1                                      | 0.05                                                   | 10                  | 1.8                                      | 0.25                                                   |
| 04                  | 1.2                                      | 0.10                                                   | 11                  | 1.9                                      | 0.25                                                   |
| 05                  | 1.3                                      | 0.10                                                   | 12                  | 2.0                                      | 0.30                                                   |
| 06                  | 1.4                                      | 0.15                                                   | 13                  | 2.1                                      | 0.30                                                   |
| 07                  | 1.5                                      | 0.15                                                   | 14                  | 2.2                                      | 0.35                                                   |
| 08                  | 1.6                                      | 0.20                                                   | 15                  | 2.3                                      | 0.35                                                   |

注：以上插拔次数为 30 次

Note: Insertion and Withdrawal for 30Cycles

**【7. SMT 红外线回流条件 SMT INFRARED 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.