

|                                      |  |  |                    |           |                     |
|--------------------------------------|--|--|--------------------|-----------|---------------------|
| <b>Product Specification(产品规格书)</b>  | <b>Issued By:<br/>Engineering Dept.</b>                                    |  |                    |           |                     |
|                                      | <b>Subject (主题):</b><br>1.50mm Pitch KR1500 Series Connector Specification | <table border="1"> <tr> <td><b>Date Issued</b></td> <td>2022/2/26</td> </tr> <tr> <td><b>Date Revised</b></td> <td>2022/2/26</td> </tr> </table> | <b>Date Issued</b> | 2022/2/26 | <b>Date Revised</b> |
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**1.0 适用范围 (Scope)**

此种规格包括1.50mm Pitch KR1500 Series 连接器规格说明。

This Specification Covers the 1.50mm Pitch KR1500 Series Connector Specification.

**2.0 规格与料号 (Spec and Part number)**

| 规格内容<br><b>Specification</b> | 产品料号<br><b>Production No.</b>      | 产品图示<br><b>Picture of Product</b> |
|------------------------------|------------------------------------|-----------------------------------|
| 胶壳/Housing                   | H150001****01A<br>H150001****02A   |                                   |
| 端子/Terminal                  | T15000PG0101A<br>T15000PT0101A     |                                   |
| 针座/Wafer                     | C1500RS1*****RA<br>C1500VS1*****RA |                                   |

**3.0 材质与表面处理 (Disposal of Material and surface)**

| 规格内容<br><b>Specification</b> |                                 | 材质<br><b>Materials</b> | 表面处理<br><b>Disposal of Surface</b> |                                   |
|------------------------------|---------------------------------|------------------------|------------------------------------|-----------------------------------|
| 胶壳/Housing                   |                                 | PA66                   | UL94 V-0                           |                                   |
| 端子/Terminal                  |                                 | Phosphor bronze        | Tin/Gold Plated Over Nickel        |                                   |
| 针座/<br>Wafer                 | 立式<br>Straight<br>(SMT 180° )   | 主体<br>Base             | LCP                                | UL94 V-0                          |
|                              |                                 | 导体<br>Contact          | Brass                              | Matte-tin/Gold Plated Over Nickel |
|                              |                                 | 固定片<br>Solder tab      | Brass                              | Matte-tin Plated Over Nickel      |
|                              | 卧式<br>Right Angle<br>(SMT 90° ) | 主体<br>Base             | LCP                                | UL94 V-0                          |
|                              |                                 | 导体<br>Contact          | Brass                              | Matte-tin Plated Over Nickel      |
|                              |                                 | 固定片<br>Solder tab      | Brass                              | Matte-tin Plated Over Nickel      |

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

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#### 4.0 额定等级 (Ratings and applicable wires)

| 项 目<br>Item                        | 规 格<br>Standard                                    |       |
|------------------------------------|--|-------|
| 额定电压Rated Voltage (Max.)           | 250V   | AC/DC |
| 额定电流Rated Current (Max.)           | 2.5A(24AWG)  |       |
| 使用温度范围Ambient temperature Range    | -40°C~+105°C                                       |       |
| 适用线径Applicable wire insulation O.D | AWG 24# ~28#<br>Insulation O.D. 0.7 to 1.1mm(Max.) |       |

#### 5.0 电气性能 (Electrical Performance)

| 项 目<br>Item                          | 条 件<br>Test Condition  | 规 格<br>Requirement                         |
|--------------------------------------|--|--|
| 5.1<br>接触阻抗<br>Contact Resistance    | 公母配合,开放电压 20mV 最大,电流 100mA最大<br>检测连接器A~B 区.<br>Mate connectors, measure by dry circuit, 20mV<br>MAX, 100mA MAX.<br>(Based upon EIA-364-23C)  | 20 milliohms Max.                          |
| 5.2<br>绝缘阻抗<br>Insulation Resistance | 公母配合,对相邻两接触导体,于1分钟内施<br>加500V 的直流电,并量测其间绝缘阻抗.<br>Mate connectors, apply 500V DC for 1 minute<br>between adjacent contacts to measure the<br>insulation resistance.<br>(Based upon EIA-364-21B) | 1000 Megohms Min.                          |
| 5.3<br>耐电压<br>Dielectric Strength    | 公母配合,在相邻端子或端子与接地端之<br>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<br>between adjacent terminal or ground.<br>(Based upon EIA-364-20A)                              | 无损毁或出现电火花<br>No Breakdown and<br>Flashover |

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**6.0 机械性能 (Mechanical Performance)**

| 项 目<br>Item                      |   | 条 件<br>Test Condition  |              | 规 格<br>Requirement                |           |           |
|----------------------------------|---|--|--------------|-----------------------------------|-----------|-----------|
| 6.1                              | 插拔力<br>Insertion & Withdrawal Force       | 以每分钟25.4±3mm的速率插入和拔出。<br>(不包含卡榫结合力)<br>Insert and withdraw connectors at the speed rate of 25.4±3mm/minute.<br>(Excluding plastic detents)<br>(Based upon EIA-364-13D) |              | 参照第8.0项<br>Refer to paragraph 8.0 |           |           |
| 6.2                              | 端子插入力<br>Terminal Insertion Force         | 铆线后之端子插入胶壳。<br>Insert the crimped terminal into the housing.   |              | 0.5 kgf (4.9 N) Max.              |           |           |
| 6.3                              | 端子保持力<br>Terminal/Housing Retention Force | 以每分钟 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.                   |              | 1.0 kgf (9.8 N) Min.              |           |           |
| 6.4                              | Pin 针保持力<br>Pin Retention Force           | 以每分钟 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.   |              | 1.0 kgf (9.8 N) Min.              |           |           |
| 6.5                              | 端子压接<br>Terminal Crimping Specification   | Wire Size  |              | 24 AWG                            | 26 AWG    | 28 AWG    |
|                                  |   | ①  | Crimp width  | 0.9~1.0                           |           |           |
|                                  |   |  | Crimp height | 0.70±0.05                         | 0.65±0.05 | 0.55±0.05 |
|                                  |   | ②  | Crimp width  | 1.15 Max.                         |           |           |
|                                  |   |  | Crimp height | 1.45 Max.                         | 1.40 Max. | 1.25 Max. |
|                                  |   | Crimp strength (kgf)   | 3.63 Min.    | 2.27 Min.                         | 1.36 Min. |           |
|                                  |   | Stripping(mm)  | 1.2~1.6      |                                   |           |           |
| ① Conductor(mm) ② Insulation(mm) |   |  |              |                                   |           |           |

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**7.0 环境性能及其它 (Environmental Performance and Others)**

| 项 目<br>Item                  | 条 件<br>Test Condition  | 规 格<br>Requirement         |                     |
|------------------------------|--|----------------------------|---------------------|
| 7.1 耐久性<br>Durability        | 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.<br>(Based upon EIA-364-09C)  | 接触阻抗<br>Contact Resistance | 40 milliohms Max.   |
| 7.2 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.<br>(Based upon EIA-364-70B)   | 温升测试<br>Temperature Rise   | 30°C Max.           |
| 7.3 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) | 外观<br>Appearance           | 无异状<br>No Damage    |
|                              |  | 接触阻抗<br>Contact Resistance | 40 milliohms Max.   |
|                              |  | 瞬断<br>Discontinuity        | 1 micro-second Max. |
| 7.4 耐冲击性<br>Shock            | 在 X.Y.Z 上 6 个方向上,以 490m/s <sup>2</sup> (50g) 冲击下各 3 回.<br>490m/s <sup>2</sup> {50g}, 3strokes in each X.Y.Z. axes.<br>(Based upon EIA-364-27B)   | 外观<br>Appearance           | 无异状<br>No Damage    |
|                              |  | 接触阻抗<br>Contact Resistance | 40 milliohms Max.   |
|                              |  | 瞬断<br>Discontinuity        | 1 micro-second Max. |
| 7.5 耐热性<br>Heat Resistance   | 105±2°C,96 hours.<br>(Based upon EIA-364-17B)  | 外观<br>Appearance           | 无异状<br>No Damage    |
|                              |  | 接触阻抗<br>Contact Resistance | 40 milliohms Max.   |
| 7.6 耐寒性<br>Cold Resistance   | -40±2°C,96 hours.<br>( Based upon EIA-364-59)  | 外观<br>Appearance           | 无异状<br>No Damage    |
|                              |  | 接触阻抗<br>Contact Resistance | 40 milliohms Max.   |

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|-------------|-------------------------|--|-------------------------------|---|
| 7.7         | 耐湿性<br>Humidity         | 温度: 40±2°C<br>湿度: 90~95%(RH)<br>持续时间: 96 hours<br>Temperature: 40±2°C<br>Relative Humidity: 90~95%<br>Duration: 96 hours<br>(Based upon EIA-364-31B)   | 外观<br>Appearance              | 无异状<br>No Damage  |
|             |                         |  | 接触阻抗<br>Contact Resistance    | 40 milliohms<br>Max.  |
|             |                         |  | 耐电压<br>Dielectric Strength    | Must meet 5.3   |
|             |                         |  | 绝缘阻抗<br>Insulation Resistance | 100 Megohms<br>Min.   |
| 7.8         | 热冲击<br>Thermal shock    | 以-40°C持续30分钟经室温5分钟,而后以105°C持续30分钟再经室温5分钟为一个循环,共循环5次.<br>One Cycle Consists Of:<br>-40°C for 30 minutes.<br>→ Room Temp. 5 minutes,<br>+105°C for 30minutes.<br>→ Room Temp. 5 minutes<br>Total Cycles: 5 Cycles.<br>(Based upon EIA-364-32B) | 外观<br>Appearance              | 无异状<br>No Damage  |
|             |                         |  | 接触阻抗<br>Contact Resistance    | 40 milliohms<br>Max.  |
| 7.9         | 盐水喷雾<br>Salt Spray      | 在温度35±2°C,盐水浓度5±1%下,盐水喷雾24小时.<br>24 hours exposure to a salt spray from the 5±1% solution at 35±2°C.<br>(Based upon EIA-364-26B)   | 外观<br>Appearance              | 无异状<br>No Damage  |
|             |                         |  | 接触阻抗<br>Contact Resistance    | 40 milliohms<br>Max.  |
| 7.10        | 焊锡附着性<br>Solder-ability | 焊接时间: 3±0.5 秒. 焊接温度: 245±5°C.<br>Soldering Time: 3±0.5 second.<br>Solder Temperature: 245±5°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. |

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| 项 目<br>Item |                            | 条 件<br>Test Condition   | 规 格<br>Requirement |                  |
|-------------|----------------------------|---|--------------------|------------------|
| 7.11        | 焊锡耐热性<br>Solder-Resistance | SMT型产品，能够承受焊锡耐热范围。<br>SMT type products, able to withstand the solder heat resistance range.<br>参考温度曲线图9.0<br>Refer to Temperature Profile9.0<br>(Based upon EIA-364-56D) | 外观<br>Appearance   | 无异状<br>No Damage |

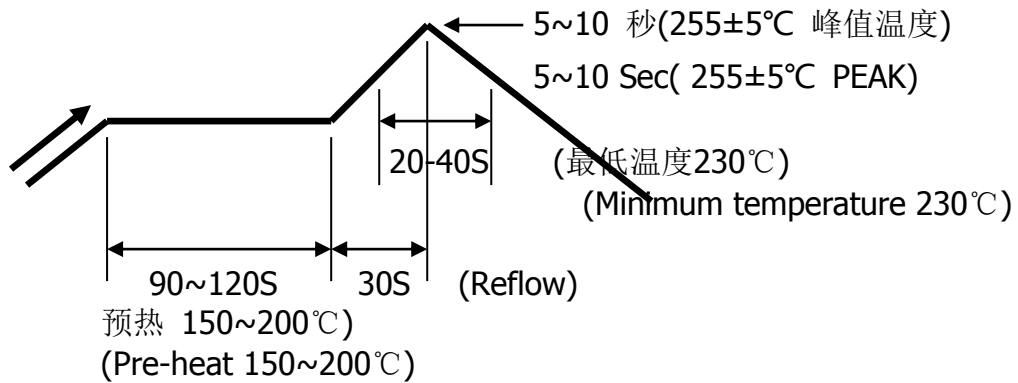
**8.0 综合插入力及拔出力 (Insertion/withdrawal force)**

<Unit: kgf>

| No. of Circuits<br>PIN数 | At Initial<br>首次插入与拔出力<br>(初始值) |                   | At 30 <sup>th</sup><br>30次插入<br>与拔出后 | No. of Circuits<br>PIN数 | At Initial<br>首次插入与拔出力<br>(初始值) |                   | At 30 <sup>th</sup><br>30次插入与<br>拔出后 |
|-------------------------|---------------------------------|-------------------|--------------------------------------|-------------------------|---------------------------------|-------------------|--------------------------------------|
|                         | I.F.(MAX.)<br>插入力               | R.F.(MIN.)<br>拔出力 | R.F.(MIN.)<br>拔出力                    |                         | I.F.(MAX.)<br>插入力               | R.F.(MIN.)<br>拔出力 | R.F.(MIN.)<br>拔出力                    |
| 2                       | 2.50                            | 0.2               | 0.2                                  | 9                       | 5.50                            | 0.9               | 0.9                                  |
| 3                       | 3.00                            | 0.3               | 0.3                                  | 10                      | 6.00                            | 1.0               | 1.0                                  |
| 4                       | 3.50                            | 0.4               | 0.4                                  | 11                      | 6.00                            | 1.1               | 1.1                                  |
| 5                       | 4.00                            | 0.5               | 0.5                                  | 12                      | 6.50                            | 1.2               | 1.2                                  |
| 6                       | 4.50                            | 0.6               | 0.6                                  | 13                      | 6.50                            | 1.3               | 1.3                                  |
| 7                       | 5.00                            | 0.7               | 0.7                                  | 14                      | 7.00                            | 1.4               | 1.4                                  |
| 8                       | 5.50                            | 0.8               | 0.8                                  | 15                      | 7.00                            | 1.5               | 1.5                                  |

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**9.0 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: 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.

**10.0 备注 (Remark)**

有关规格书内容经变更或改版, 如未能及时发布与通知, 烦请联系我司业务人员提供产品最新资讯

Any change or revision for the product specification will not be announced in advance.

Please contact our sales representative for the latest information.

Written: Arvin

Checked: /

Approved: Min xinhao