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| <b>Product Specification [产品规格书]:</b>                                        | Document No  | PS-HRS-1271-01 |
| <b>Subject [主题]:</b><br>1.27mm Pitch HRS-1271 Series Connector Specification | Date Issued  | 2017/01/10     |
|                                                                              | Date Revised | 2020/08/10     |
|                                                                              | Version      | B              |

This specification is referred to the 1.27mm series Hearer Connector

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### 【1.适用范围 Scope】

此种规格包括 1.27mm Pitch 1271 Series 排针排母连接器规格说明。

This Specification Covers the 1.27mm Pitch 1271 Series PIN Header & Female Header 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.                     |
|-----------------------|--------------------------------------------|
| 排针/ Pin header        | HRS-1271WV-XXX-xx<br>HRS-1271WV-2*XXX-XXXX |
| 排母/Female Header      | HRS-1271FV-XXXxxx<br>HRS-1271FV-2*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             |
|-----------------------|------|--------------------------|-----------------------------------------|
| Header                | Base | High Temperature Plastic | UL 94V-0                                |
|                       | PIN  | 黄铜/Brass                 | Gold-Flash、15u"Au、30 u"Au<br>50u"Ni Min |

(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】

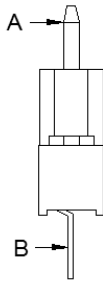
| 项 目【Item】                        | 规 格【Standard】 |         |
|----------------------------------|---------------|---------|
| 额定电压 Rated Voltage (Max.)        | 250V          | [AC/DC] |
| 额定电流 Rated Current (Max.)        | 1A            |         |
| 使用温度范围 Ambient temperature Range | -40℃~+105℃    |         |

【 \*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    | <p>公母配合,开放电压 20mV 以下,电流 10mA 检测连接器 A~B 区.</p> <p>Mate connectors, measure by dry circuit, 20mV MAX, 10mA.</p> <p>(Based upon EIA-364-06A).</p>  | <p>Initial:<br/>20 milliohms Max.</p> <p>After Test:<br/>30 milliohms Max.</p> |
| 5-1-2<br>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 500V 的直流电,检测连接器.</p> <p>Mate connectors, apply 500V DC between adjacent terminal or ground.</p> <p>(Based upon EIA-364-21B / MIL-STD-202 Method 302 Cond.B)</p>                                          | 100 Megohms Min.                                                               |
| 5-1-3<br>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 500V 的交流电 1 分钟,检测连接器.</p> <p>Mate connectors, apply 500V AC for 1 minute between adjacent terminal or ground.</p> <p>(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>                                 |

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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<br>插拔力<br>Insertion<br>& Retention<br>Force | 以每分 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.            | Mating Force:<br>0.15kgf/ Max./Per Pin<br>Unmating Force:<br>0.01 Kgf/ Min Per Pin |
| 5-2-2<br>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 内轴向拔出的力量。<br>Apply axial push force at the speed rate of 25.4±3mm/minute. | 0.5Kgf Min                                                                         |
| 5-2-3<br>端子保持力<br>Contact<br>Retention<br>force   | 以每分 25.4±3mm 的速率,将端子从 Wafer 内轴向拔出的力量。<br>Apply axial push force at the speed rate of 25.4±3mm/minute.     | 0.3Kgf Min                                                                         |

## 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<br>重复插拔<br>Repeated<br>Insertion/<br>Withdrawal | 以每分 不超过 10 次的速率,将公母插拔 30 次。<br>When mated up to 50 cycles repeatedly by the rate of 10 cycles per minute.                                                                                                                           | 接触阻抗<br>Contact<br>Resistance<br>30 milliohms<br>Max. |
| 5-3-2<br>温升测试<br>Temperature<br>Rise                  | 公母对插后,在通过额定电流下,所测定的温度。<br>Carrying rated current load. (UL 1977)                                                                                                                                                                    | 温升测试<br>Temperature<br>rise<br>30℃ Max.               |
| 5-3-3<br>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<br>无异状<br>No Damage                  |
|                                                       |                                                                                                                                                                                                                                     | 接触阻抗<br>Contact<br>Resistance<br>30 milliohms<br>Max. |
|                                                       |                                                                                                                                                                                                                                     | 瞬断<br>Discontinuity<br>1 micro-<br>second Max.        |

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| 项 目<br>【Item】 |                        | 条 件<br>【Test Condition】                                                                                                                                                           | 规 格<br>【Requirement】          |                     |
|---------------|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---------------------|
| 5-3-4         | 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    | 30 milliohms Max.   |
| 5-3-5         | 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    | 30 milliohms Max.   |
| 5-3-6         | 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    | 30 milliohms Max.   |
|               |                        |                                                                                                                                                                                   | 耐电压<br>Dielectric Strength    | Must meet 5-1-3     |
|               |                        |                                                                                                                                                                                   | 绝缘阻抗<br>Insulation Resistance | 500 Megohms Min.    |
| 5-3-7         | 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    | 30 milliohms Max.   |
|               |                        |                                                                                                                                                                                   | 瞬断<br>Discontinuity           | 1 micro-second Max. |

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| 项 目<br>【Item】 |                                | 条 件<br>【Test Condition】                                                                                                                                                | 规 格<br>【Requirement】          |                                                                                 |
|---------------|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---------------------------------------------------------------------------------|
| 5-3-8         | 温度变化<br>Temperature<br>Cycling | 从-40℃持续 30 分锺升至+105℃持续 30 分锺,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<br>Resistance | 30 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 48±1 小时.<br>48±1 hours exposure to a salt spray from the 5±1% solution at 35±2℃.<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<br>Resistance | 30 milliohms<br>Max.                                                            |
| 5-3-10        | 焊锡附着性<br>Solder-<br>ability    | 焊接时间: 3~5 秒.<br>焊接温度: 245±5℃.<br>Soldering Time: 3~5second.<br>Solder Temperature: 245±5℃.<br>(Based upon EIA-364-52)                                                  | Solder Wetting                | 浸渍面积需 95%<br>以上<br>95% of<br>immersed area<br>must show no<br>voids, pin holes. |
| 5-3-11        | 焊锡耐热性<br>Solder-<br>Resistance | 焊接时间: 3~5 秒.<br>焊接温度: 260+5/-5℃.<br>Soldering time:3~5 sec solder.<br>Temperature:260+5/-5℃.<br>(Based upon EIA-364-56A)                                               | 外观<br>Appearance              | 无异状<br>No Damage                                                                |