DONGGUAN HANHAO PRECISION ELECTRONIC CO., LTD

| Product Specification [产品规格书]: | ISSUED BY: | ISSUED BY: Engineering Dept | |
|--|--------------|-----------------------------|--|
| Subject [主题]: | Date Issued | 2022/08/24 | |
| 1.00mm Pitch 1006 Series Connector Specification | Date Revised | 2022/08/24 | |

This specification is referred to the 1.00mm series wire to board connector

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【1.适用范围 Scope】

此种规格包括 1.00mm Pitch 1006 Series 连接器规格说明.

This Specification Covers the 1.00mm Pitch 1006 Series Connector Specification.

【2.规格与料号 Spec and Part number】

| 规格内容 | 产品料号 | 产品图示 |
|---------------|----------------|--------------------|
| Specification | Production No. | Picture of Product |
| 端子/Terminal | 1006T | NONE |
| 胶壳/Housing | 1006H-XX | NONE |
| 针座/Wafer | 1006WRS-XX | 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 | Over Nickel $40\mu''$, Over Tin $40\mu''$ |
| 胶壳/Housing | | PA66 | UL 94V-0 |
| | Base | High Temperature Plastic | UL 94V-0 |
| 针座/Wafer | PIN | 磷铜/Phosphor Bronze | Over Nickel 40µ″, Gold Flash |
| | Solder tab | 黄铜/Brass | Over Nickel $40\mu''$, Over Tin $40\mu''$ |

⁽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.) | 150V | [AC/DC] | |
| 额定电流 Rated Current (Max.) | 1.5A | [AC/DC] | |
| 使用温度范围 Ambient temperature Range | -25°C~+85°C | | |
| 适用线径 Applicable wire insulation O.D | AWG 28-30# Insulation O.D. 0.7mm(Max.) | | |

| APPROVED BY:Tommy | Sheet: 2 of 7 |
|-------------------|-------------------|
| | APPROVED BY:Tommy |

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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 Contact 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: 20 milliohms Max. After Test: 40 milliohms Max. |
| 5-1-2 | 绝缘阻抗 Insulation Resistanc e | 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. Mate connectors, apply 500V DC between adjacent terminal or ground. (Based upon EIA-364-21B / MIL-STD-202 Method 302 Cond.B) | 1000 Megohms Min. |
| 5-1-3 | 耐电压 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分锺,检测连接器. Mate connectors, apply 500V AC for 1 minute between adjacent terminal or ground. (Based upon EIA-364-20A / MIL-STD-202 Method 301) | 不出现中断等情况 No Breakdown and Flashover |
| 5-1-4 | 铆线后端子接 触阻抗 Contact resistance on crimped portion | 铆线后之端子,开放电压 20mV 以下,电流 10mA 检测连接器. Crimp the applicable wire on to the terminal measure by dry circuit 20mV MAX, 10mA. | 10 milliohms Max. |

| WRITTEN BY: James | APPROVED BY:Tommy | Sheet: 3 of 7 |
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5-2. 机械的性能 Mechanical Performance.

| | 5-2. 水(板的)主能 Piechanical Periormanice. | | | | |
|--|---|--|------------|--------|--|
| | 项 目 | 条 /Tank Condition | | 各 | |
| | 【Item】 | [Test Condition] | [Requireme | ent] | |
| 5-2-1 | 插拔力 Insertion & Retention Force | 以每分锺 25.4±3mm 的速率插入和拔出 Insert and withdraw Connectors at th speed rate of 25.4±3mm/minute. | - 参照第 b リ | • | |
| 5-2-2 | 端子保持力 Terminal/ Housing Retention Force | 以每分 25.4±3mm 的速率,将端子从 Housin 内轴向拔出的力量. Apply axial pull out force at the speed rated 25.4±3mm/minute on the terminal assembled in the housing. | | Min. | |
| 5-2-3 | 端子插入力 Terminal Insertion Force | 铆线后之端子插入Housing所需最大力量 Insert the crimped terminal into th housing. | | · Max. | |
| 5-2-4 | Pin 针保持力 Pin Retention Force | 以每分 25.4±3mm 的速率,将 PIN 针从Wafer 内轴向拔出的力量. Apply axial push force at the speed rate of 25.4±3mm/minute. | | · min. | |
| WRITTEN BY: <u>James</u> APPROVED BY: <u>Tommy</u> Sheet: 4 of 7 | | | | | |
| | WIGHTEN DT. James ATTROVED DT. TORRING CHEEK 4 OF 7 | | | | |

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| | 项目 | 条件 | 规 | | 格 | |
|--------|------------------|--|-------------------|--------|----------|---------|
| [Item] | | Test Condition | [Requirement] | | | |
| | | 固定铆线后的端子,使电线与端子分离时 | AWG# | #28 | #30 | |
| 5-2-5 | | 所需的最小力量. | | | | |
| | | Fix the crimped terminal, apply axial pull | Spec.kgf. | 1.0 | 0.5 | |
| | 端子压着强度 | out force on the wire. (Do not crimp | Min. | | | |
| | Tensile strength | insulation part). | | | | |
| | (Crimped | Contact. Wire | | ' | | |
| | connections) | | Note> As for unsp | | nspecif | ecified |
| | _ | | wire sizes ir | this s | specific | cation |
| | | Pulling load | define va | lues w | ith clie | ents |
| | | | | | | |

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

| 项 目 【Item】 | | 条 件 【Test Condition】 | 规 格 【Requirement】 | | |
|---------------|--|--|-------------------------------|-------------------------|--|
| 5-3-1 | 重复插拔 Repeated Insertion/ Withdrawal | 以每分锺不超过 10 次的速率,将公母插拔50 次. When mated up to 50 cycles repeatedly by the rate of 10 cycles per minute. | 接触阻抗 Contact Resistance | 40 milliohms Max. | |
| 5-3-2 | 温升测试 Temperature Rise | 公母对插后,在通过额定电流下,所测定的温度. Carrying rated current load. (UL 1977) | 温升测试 Temperature rise | 30°C Max. | |
| | 耐振动性 Vibration | 振幅: 1.5mm P-P 时间: 10~55~10 HZ in 1 minute 持续时间: 每轴向 2 小时 Amplitude: 1.5mm P-P Sweep time: 10~55~10 HZ in 1 minute Duration: 2 hours in each X.Y.Z axials. (Based upon EIA-364-28B/MIL-STD-202 Method 213B Cond.A) | 外观 Appearance | 无异状 No Damage | |
| 5-3-3 | | | 接触阻抗 Contact Resistance | 40 milliohms Max. | |
| | | | 瞬断 Discontinuity | 1 micro- second Max. | |
| | 耐冲击性 Shock | | 外观 | 无异状 | |
| | | 在 X.Y.Z 上 6 个方向上,以 490m/s²(50g 的 | Appearance | No Damage | |
| 5-3-4 | | 力量) 冲击下各 3 回 .490m/s ² {50G}, 3 strokes in each X.Y.Z. axes. | 接触阻抗 Contact Resistanc | 40 milliohms Max. | |
| | | (Based upon EIA-364-27B/MIL-STD-202 Method 213B Cond.A) | 瞬断 Discontinuity | 1 micro- second Max. | |

| RITTEN BY: <u>James</u> | APPROVED BY: <u>Tommy</u> | Sheet: 5 of 7 |
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| | | |

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| | 项目 | 条 件 | 规 | 格 |
|--------|--------------------------------|--|---|---|
| | [Item] | 【Test Condition】 | [Require | |
| | | | 外观 | 无异状 |
| | 耐热性 | 85±2°C,96 hours. | Appearance | No Damage |
| 5-3-5 | Heat Resistance | (Based upon MIL-STD-202 Method 108A Cond.A) | 接触阻抗 Contact Resistance | 40 milliohms Max. |
| | | | 外观 | 无异状 |
| 5-3-6 | 耐寒性 Cold Resistance | -25±5°C,96 hours. (Based upon EIA-364-105) | Appearance 接触阻抗 Contact Resistance | No Damage 40 milliohms Max. |
| | | 温度: 40±2℃ | 外观 Appearance | 无异状 No Damage |
| | 耐湿性 Humidity | 湿度: 90~95%(RH) 持续时间: 96 hours | 接触阻抗 Contact Resistance | 40 milliohms Max. |
| 5-3-7 | | Temperature: 40±2°C Relative Humidity: 90~95% | 耐电压 Dielectric Strength | Must meet 5-1-3 |
| | | Duration: 96 hours (Based upon EIA-364-31A/MIL-STD-202 Method 103B Cond.B) | 绝缘阻抗 Insulation Resistance | 100 Megohms Min. |
| F 2 0 | 温度变化 Temperature Cycling | 从-25℃持续 30 分锺升至+85℃持续 30 分锺, 循环 5 次. 5 cycles of: a) -25℃ 30 minutes. | 外观 Appearance | 无异状 No Damage |
| 5-3-8 | | b) +85°C 30 minutes. (Based upon EIA-364-32B) | 接触阻抗 Contact Resistance | 40 milliohms Max. |
| 5-3-9 | 盐水喷雾 Salt Spray | 在温度 35±2℃,盐水浓度 5±1%下,盐水喷雾 24±1 小时. | 外观 Appearance | 无异状 No Damage |
| | | 24±1 hours exposure to a salt spray from the 5±1% solution at 35±2°C. (Based upon EIA-364-26A/MIL-STD-202 Method 101D Cond.B). | 接触阻抗 Contact Resistance | 40 milliohms Max. |
| 5-3-10 | 焊锡附着性 Solder- ability | 焊接时间: 3±0.5 秒. 焊接温度: 245±5℃. Soldering Time: 3±0.5second. Solder Temperature: 245±5℃. | Solder Wetting | 浸渍面积需 95%以上 95% of immersed area must show no voids, pin holes |
| \A/E | RITTEN BY:Jar | mes APPROVED BY:To | mmy | Sheet: 6 c |

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|--------|-------|--|-------------------------|------------------|
| 【Item】 | | 【Test Condition】 | 【Require | ement】 |
| 5-3-11 | 焊锡耐热性 | 焊接时间: 5~10 秒. 焊接温度: 250+5/-5℃. Soldering time:5~10 sec solder. Temperature:250+5/-5℃. (Based upon EIA-364-56A) | 外观 Appearance | 无异状 No Damage |

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

| PIN 数 No. of CKT | 初次插入力(最大值) First Insertion (kgf Max.) | 30 次拔出力(最小值) 30 th Withdrawal (kgf Min.) | PIN 数 No. of CKT | 初次插入力(最大值) First Insertion (kgf Max.) | 30 次拔出力(最小值) 30 th Withdrawal (kgf Min.) |
|------------------------|---|---|------------------------|---|---|
| 2 | 1.5 | 0.07 | | | |
| 3 | 1.5 | 0.11 | | | |
| 4 | 1.5 | 0.15 | | | |
| 5 | 1.5 | 0.19 | | | |
| 6 | 1.5 | 0.23 | | | |

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】

5~10 秒(250+5/-5℃ 最高溫度)
5~10 Sec(250+5/-5℃ PEAK

20~40 秒 (230℃ 最小)
90~120

90~120

(预熱 150~200℃)
(Pre-heat 150~200℃

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.

| WRITTEN BY:James | APPROVED BY:Tommy | Sheet: 7 of 7 |
|-------------------------------|----------------------|----------------|
| With I Liv B I . <u>oames</u> | ALL ROVED DISTORNING | 011001. 7 01 7 |