



韩国韩荣部品株式会社
东莞市韩荣电子科技有限公司

承认书

| | | | |
|--------------------------------|---|---|---|
| 客户 CUSTOMER | | | |
| 客户料号 CUSTOMER MODEL: | | | |
| 品 名 PART NAME | DC 插座 | | |
| 型 号 MODEL | DC-006-165A | | |
| 承认单位 DEPT | 检验 INSPECT (QC) | 审核 CHECK (R&D) | 批准 APPD (R&D) |
| 承认人 RESPONSIBLE | | | |
| 判 定 DETERMINE | OK <input type="checkbox"/> NG <input type="checkbox"/> | OK <input type="checkbox"/> NG <input type="checkbox"/> | OK <input type="checkbox"/> NG <input type="checkbox"/> |

韩国韩荣部品株式会社

KOREAN HROPARTS ELECTRONICS CO.,LTD

ADD: 118-4 Zhen Chen 3 Xin Buk Chun City Gang Won Do Korea

E-mail: kr@krhro.com

东莞市韩荣电子科技有限公司

DONGGUAN HRO ELECTRONICS TECHNOLOGY CO.LTD

TEL: 86-769-87818100 87818200 87818300

FAX: 86-769-87818500

Http: www.krhro.com

E-mail: sales@krhro.com

ADD: 中国广东省东莞市塘厦镇 138 工业区宏业北二横路 1 号

本厂工程部审核:

ENGINEERING DEPT:

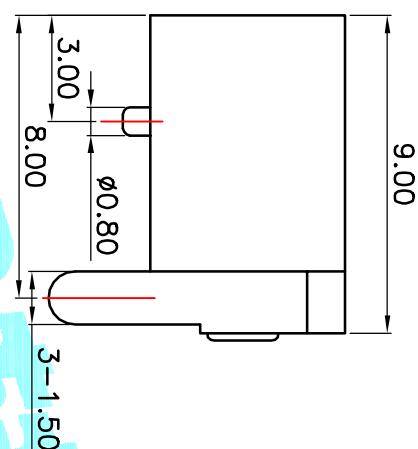
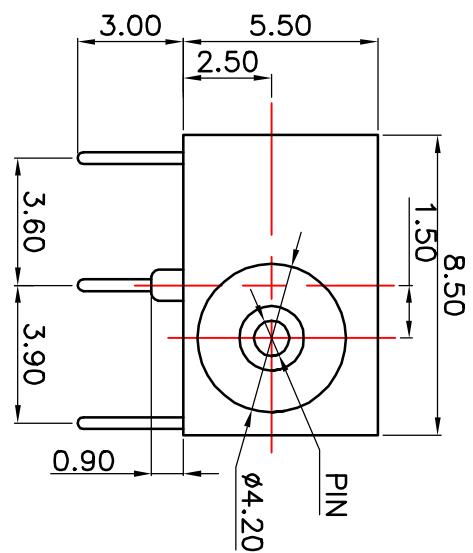
东莞市韩荣电
子科技有限
公司工程部

日期: 年 月 日

RoHS

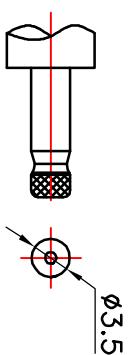
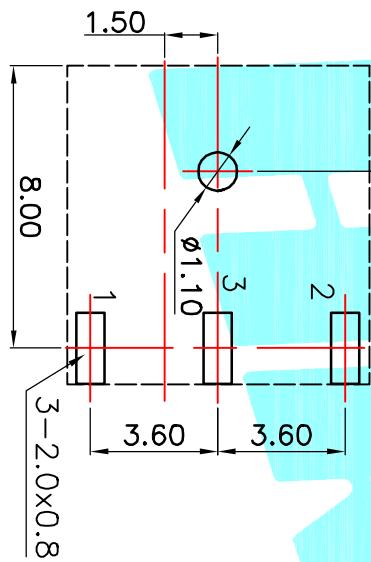
让客户 100% 满意的高品质开关插座供应商

ROHS



| Model No. | DC-006-A | DC-006-B |
|------------------------|----------|----------|
| PIN | φ1.0 | φ1.65 |
| CIRCUIT DIAGRAM | | |

P.C.B LAYOUT(Copper-side view)



Rating:0.5A 30V DC
Contact Resistance:100 mΩ Max.
Operating temperature:−20°C~70°C
Operating force:3~20N
Life:5,000cycles

| ECN NO. | REV. | DATE. | DESCRIPTION. |
|---------|------|-------|--------------|
| — | A | — | NEW |

| ② | Terminal | 3 | Phosphor bronze | Au Plating | — | — |
|----------------|-----------|-----------|-----------------|---------------------|--------------|--------------|
| ① | Housing | — | 1 | Nylon | Black | — |
| ITEM | PART NAME | TER'NO. | QTY. | MATERIAL | FINISHING | REMARK |
| APPROVALS | DATE | J.X.Zhang | 2013/11/1 | ELECTRONICS CO.,LTD | PHONE JACKES | — |
| DRAWN | | | | | | |
| CHECKED | | | | | | |
| APPROVALS | | | | | | |
| TOLERANCES ARE | 30~19.5° | ±0.30 | ANGLE | UNIT: mm | SCALE: 1:1 | PROL |
| | 10~30 | ±0.20 | | | | |
| | 5~10 | ±0.15 | | | | |
| | ~ 5 | ±0.10 | ±2° | DRAWING NO. | — | SHEET 1 OF 1 |

| | | | | | |
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| HRO 韩荣® KOREAN HROPARTS ELECTRONICS CO.,LTD | | 文件编号 FILE NO. | HR-SPEC-003 | 页码 PAGE | 1/5 |
| | | 发布日期 DATE OF ISSUE | 2016 年 10 月 09 日 | | |
| PRODUCT SPECIFICATION 产品承认书 | | 文件版本 EDITION | 第 A 版 第 3 次修订 | | |
| Title 名称 | DC 插座 DC POWER JACKES | 产品料号 PART NO. | DC 系列 | | |

1. General specification 基本事项

1. 1 action : DC POWER JACKES
 种类 : DC 插座
1. 2 Switch rating 最大额定值 : D. C. 30V , 50 mA
1. 3 Operation temperature range 使用温度试验范围 : - 25~ + 80°C
1. 4 Preservative temperature range 保存温度范围 : - 30~ + 85°C
1. 5 Appearance and dimensions : See outside drawing page
 外形及尺寸 : 见外形尺寸图
- 1.6 General test condition (Tests and measurements shall be made under the following standard conditions unless otherwise specified): 正常测试条件(未有特殊说明量测在以下条件进行):
- Ambient temperature 温度: 5 ~ 35°C
- Relative humidity 相对湿度: 45 ~ 85%RH
- Air pressure 气压: 86 ~ 106kPa (860~1060mbar)
- However, if doubt arises on the decision based on the measured Values under the above-mentioned conditions, the following conditions shall be employed:
- 但是在对判定产生疑义时,按下述状态实施:
- Ambient temperature 温度: 20±2°C
 Relative humidity 相对湿度: 65±5%
 Air pressure 气压: 86 ~ 106kPa (860~1060mbar)

2. Performance 性能

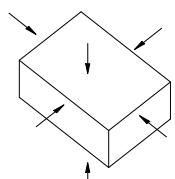
2.1 Electrical characteristics 电气性能

| No. | Item 项目 | Test condition 试验 条 件 | Performance 规格 |
|-------|-------------------------------|--|--------------------------------------|
| 2.1.1 | Contact resistance 接触电阻 | Measured at low current(10mA or less) 在低电流 (≤10MA) 条件下测试 | 100mΩ MAX 100mΩ 以下 |
| 2.1.2 | Insulation resistance 绝缘电阻 | Measurement shall be made between adjacent terminals, between terminal and shell(DC 500V) 测试相邻引脚之间, 引脚与处壳之间的绝缘阻抗(DC 500V) | 100MΩ min 100MΩ 以上 |
| 2.1.3 | Withstand voltage 耐电压 | Apply certain voltage (50-60Hz , AC 500V) for 1 minute between adjacent contacts of the connector with 0.5mA Leakage sensitivity. 输入一定电压(50-60Hz, 电压值 AC 500V)1分钟, 漏电流为 0.5mA, 测试邻近端子间 | No. insulation destruction. 无绝缘破坏 |

2.2 Mechanical Characteristics 机械性能

| | | | |
|-------|---------------------------------------|---|-----------------------------|
| 2.2.1 | Insertion & Extraction Force 插 拔 力 | Products mated 3 cycles, fix the species in the force gauge and test the mating force of the connector . 产品插拔三次后,置于插拔力测试计上测试插入力和拔出力. | 2.94-29.4 N. (0.3Kg-3Kg) |
|-------|---------------------------------------|---|-----------------------------|

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| No. | Item 项目 | Test condition 试验 条 件 | Performance 规 格 |
|-------|--------------------------------|---|---|
| 2.2.2 | Load Strength of Terminal 端子强度 | Apply 0.5Kg load to terminal of the connector in any direction for 1 minute. 于连接端子处上方垂直施加0.5Kg的力，持续时间1分钟。 | Terminal shall be not broken off, rupture, looseness and other defects. 端子无变形，断裂，等异常。 |
| 2.2.3 | Conditions for reflow 回流焊焊接 | Soldering area: t/2 of P.W.B. thickness (P.W.B:T=1.6) 焊接面积：印刷基板的1/2 厚度处 (P.W.B:T=1.6) Soldering temperature : 250± 5 °C 焊接温度：250± 5 °C soldering time : 5 ±1s 焊接时间：5 ±1 秒 【适用于贴片式产品】 | No damage (electrical andmechanical) 无异常。 (电气、机械特性) |
| 2.2.4 | Wave-soldering 波峰焊焊接 | Terminals shall be dipped in the solder bath at 250±5 °C for 3-5s (seconds without additional force for terminals) 端子焊接部分浸入焊炉，锡炉温度 250±5°C，焊接时间 3-5 秒。(焊接时不可于端子施加外力)。 插件物料手工焊接时需保证烙铁设置温度在 350°C 内，焊接时间 3 秒内，烙铁头接触引脚与元件本体距离要求为 2~4MM 之间； 【适用于插件式产品】 | No damage (electrical andmechanical) 无异常。 (电气、机械特性) |
| 2.2.5 | Solderability 可焊性 | After sprayed flux 涂上助焊剂后 temperature :235± 5 °C 温度：235± 5 °C soldering time :2±0.5 sec 焊接时间：2±0.5 秒 | 90% or more of surface area of the portion immersed in solder shall be covered by new solder 90% 或更多的浸焊面积能被焊锡覆盖. |
| 2.2.6 | Shock 耐冲击性 | Measure after test at a condition below 在下列条件下进行测试后的量度 Peak acceleration----80G 冲击加速度-80G Test time-6direction ,each 3 times total 18times 测试次数-6 个方向，各3 次共计18 次。  | No.2.1 and 2.2.1 to 2.2.2 shall be satisfied 第2.1 及2.2.1—2.2.2 都应符合要求 |

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2.3 Durability characteristics 耐久性

| No. | Item 项目 | Test condition 试验 条 件 | Performance 规格 |
|-------|---|---|---|
| 2.3.1 | Endurance (switching) action 耐久特性 (开关寿命) | <p>Switch shall be operated continuously at 20~50 cycles /5000 times. 开关在寿命试验设备上以 20~50 次 / 分的速度连续被操作,5000 次。</p> | <p>After test, Insulation resistance: 10MΩ Min 实验后: 绝缘电阻: 10MΩ Min Insertion & Extraction Force: 2.94-29.4 N (0.3-3Kg) 插拔力: 2.94~29.4 N (0.3-3Kg)</p> |

2.4 Climatic characteristics 耐候性能

| No. | Item 项目 | Test condition 试验 条 件 | Performance 规格 |
|-------|------------------|---|--|
| 2.4.1 | Cold test 耐寒性 | <p>(1) Temperature : - 20±2 °C 温度: - 20±2 °C</p> <p>(2) Duration of test: 96h 持续时间: 96 小时</p> <p>(3) Take off a drop water 去掉水珠</p> <p>(4) Standard conditions after test : 1h 试验后的放置条件: 1 小时</p> | <p>Contact resistance 100 mΩ max No. 2.1.2 to 2.1.4 and No. 2.2.1 to 2.2.2 shall Be satisfied 接触电阻 100 mΩ 以下 满足2.1.2 到2.1.4 项、2.2.1到2.2.2 项.</p> |
| 2.4.2 | Heat test 耐热性 | <p>(1) Temperature : 80±2 °C 温度: 80±2 °C</p> <p>(2) Duration of test: 96h 持续时间: 96 小时</p> <p>(3) Standard conditions after test : 1h 试验后的放置条件: 1 小时</p> | <p>Contact resistance 50mΩ max No. 2.1.2 to 2.1.4 and No. 2.2.1 to 2.2.2 shall Be satisfied 接触电阻 100mΩ以下 满足2.1.2 到2.1.4 项2.2.1到2.2.2 项.</p> |

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| No. | Item 项目 | Test condition 试验 条件 | | | Performance 规格 |
| 2.4.3 | Temperature cycle 温度循环 | (1) Test cycles :20 cycles 试验周期: 20 个周期 (2) Standard condition after test :1h 试验后的放置条件: 1 小时 | | | No damage Electrical and mechanical 无异常 电气、机械性能 |
| 2.4.4 | Humidity test 耐湿性 | (1) Temperature : $40\pm2^{\circ}\text{C}$ 温度: $40\pm2^{\circ}\text{C}$ (2) relative humidity: $\leq 85\% \text{ RH}$ 相对湿度: $\leq 85\% \text{ RH}$ (3) Duration of test: 96h 持续时间: 96 小时 (3) Take off a drop water 去掉水珠 (4) Standard conditions after test : 1h 试验后的放置条件: 1 小时 | | | Contact resistance $50\text{m}\Omega$ max No. 2.1.2 to 2.1.4 and No. 2.2.1 to 2.2.2 shall Be satisfied 接触电阻 $50\text{m}\Omega$ 以下 满足2.1.2 到2.1.4 项、2.2.1 到2.2.2 项. |
| 2.4.5 | Salt mist Test 盐雾实验 | The switch shall be subjected to a fine mist of salt solution at a temperature of $35\pm2^{\circ}\text{C}$ for 24H continuously (salt solution concentration $5\pm1\%$ by weight) 温度: $35\pm2^{\circ}\text{C}$ 浓度: $5\pm1\%$ 时间: 24H After immersing , salt deposit shall be removed by running water. 试验后, 将盐沉积物用水冲掉 | | | No remarkable corrosion shall be recognized in metal parts 在金属件上没有严重腐蚀斑点 |



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3. Precaution 注意事项 3.1 Soldering condition 浸焊条件

| ITEM 项目 | CONDITION 条件 |
|-------------------------------|--|
| Preheat temperature 预热温度 | 110°C max (Embilomental temperature of soldering surface of P. W. E) 110°C 以下(印刷基板焊锡面周围的温度) |
| Preheat time 预热时间 | 60 sec, max 60 秒以内 |
| Area of flux 助焊剂的面积 | 1/2 max of P. W. B. thickness 印刷基板厚度的 1/2 以内 |
| Temperature of solder 焊锡温度 | 250°C max 250°C 以下 |
| Time of immersion 浸焊时间 | Within 5 sec 5 秒以内 |
| Soldering number 浸焊次数 | Within 2 times (But should bring down heat of the first soldering) 2 次以内 (但应把第一次焊锡的温度降下来) |
| Printed wiring board 印刷基板 | Single sided copper-clad laminates 单面铜箔 |

- (1) After switches were soldered, please be careful not to clean switches with solvent
开关浸焊后,注意不要用溶剂清洗.
- (2) In the case of using soldering iron, soldering conditions shall be 350°C max and 3 sec. max
在使用铬铁的情况下,焊锡温度应在350°C 以下、3 秒以内.
- (3) Right after switches were soldered; please be careful not to load on the knobs of switches.
浸焊后,注意不要在顶部施加负荷.

3.2 Design instructions(设计中应注意的事项)

- (1) Follow recommended P. W. B. piercing plan in outside drawing page. 印刷基板的安装孔尺寸参见产品图.
- (2) Design key top as fig. Design inclination of key top 4 deg. max as fig. (Recommended operating condition.)
击键部设计如图,击键部倾斜度如图在4 度以内. (参见操作条件).

3.3 Note(注意点)

- (1) Please be cautious not to give excessive static load or shock to switches.
注意不要施加超负荷的压力或晃动开关.
- (2) Please be careful not to pile up P. W. B. after switches were soldered.
开关焊接以后,印刷基板注意不要叠放.
- (3) Preservation under high temperature and high humidity or corrosive gas should be avoided especially. When you need to preserve for a long period, do not open the carton.
保管时尤其应注意避开高湿高温和有腐蚀性气体的环境.如需长时间保存,请不要打开包装箱.

制表: 张海燕 审核: 徐其峰