

**【\*】<sup>®</sup> 慈溪市东威电子有限公司**  
**CIXI CITY DONGWEI ELECTRONICS CO., LTD**

*SPECIFICATION*

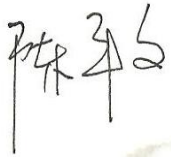


客 户  
 CUSTOMER: \_\_\_\_\_

品 名  
 TITLE: 拨码开关 (SMT SWITCH)  
 \_\_\_\_\_

型 号  
 PART ON.: HAD-03LW-R  
 \_\_\_\_\_

客 户 型 号  
 CUSTOMER PART NO.: \_\_\_\_\_

日 期  
 DATE: \_\_\_\_\_

|   |                   |  |   |
|---|-------------------|--|---|
| 制 样<br>DESIGNED BY  | 审 核<br>CHECKED BY | 批 准<br>APPROVED BY   | 送样印<br>SENDING PRINT  |
|  | Alice             |  |  |
| 客 户 确 认<br>CUSTOMER APPROVAL  |                   | 承 认 印 APPD PRINT   |   |
|   |                   |  |   |

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慈溪市东威电子有限公司

CIXI CITY DONGWEI ELECTRONICS CO.,LTD

## 制品规格 SPECIFICATIONS OF PRODUCTS

|                      |              |                     |           |                    |                 |
|----------------------|--------------|---------------------|-----------|--------------------|-----------------|
| 文件编号<br>DOCUMENT NO. | DW-SP-012-03 | 发行日期<br>ISSUED DATE | 2012-4-17 | 版本: 2.0<br>VERSION | 页次: 2/4<br>PAGE |
|----------------------|--------------|---------------------|-----------|--------------------|-----------------|

### 1. 材料 MATERIALS

|  |                 |   |
|--|-----------------|---|
|  | 上盖: 工程塑料, 黑色    | COVER: Engineering Plastics, Black          |
|  | 底座: 工程塑料, 黑色    | BASE: Engineering Plastics, Black           |
|  | 按键: 工程塑料, 白色或橙色 | KEY: Engineering Plastics, White or orange  |
|  | 端子: 铜合金, 镀金或者镀锡 | TERMINAL: Alloy Copper, Plating Gold or Tin |

### 2. 产品命名 PRODUCT NAMING

|    |   |                           |   |                                      |   |   |   |   |  |
|----|---|---------------------------|---|--------------------------------------|---|---|---|---|--|
| HA | X | —                         | X | X                                    | X | X | X | X |  |
|    |   | R为环保型, 0为普通型              |   | R: rohs 0: common                    |   |   |   |   |  |
|    |   | 直插式引脚尖端的行距                |   | Row space of Dip item:               |   |   |   |   |  |
|    |   | A: 8.20mm B: 7.62mm C: 内弯 |   | A: 8.20mm B: 7.62mm C: J lead        |   |   |   |   |  |
|    |   | 按键的颜色:                    |   | Color of key:                        |   |   |   |   |  |
|    |   | W白色 0橙色 H混合色              |   | W:white 0:orange H:mixed color       |   |   |   |   |  |
|    |   | 按键形式:H高按键 L低按键            |   | Form of the key:H:high key L:low key |   |   |   |   |  |
|    |   | 产品位数                      |   | Position of Product                  |   |   |   |   |  |
|    |   | 引脚形式:M直插式 D贴片式            |   | Type:M:Dip D:SMT                     |   |   |   |   |  |
|    |   | HA系列                      |   | HA Series                            |   |   |   |   |  |

### 3. 产品位数代号 NUMBER OF POSITIONS

|     |     |       |      |      |     |       |       |      |     |        |
|-----|-----|-------|------|------|-----|-------|-------|------|-----|--------|
| 01  | 02  | 03    | 04   | 05   | 06  | 07    | 08    | 09   | 10  | 12     |
| 一位  | 二位  | 三位    | 四位   | 五位   | 六位  | 七位    | 八位    | 九位   | 十位  | 十二位    |
| one | two | three | four | five | six | seven | eight | nine | ten | twelve |

### 4. 电气性能 ELECTRICAL CHARACTERISTICS

| 项目 ITEM |  | 性能 PERFORMANCE                  |
|---------|--|---------------------------------|
| 4.1     | 接触电阻(初始值)<br>CONTACT RESISTANCE (INITIAL):           | ≤50mΩ                           |
| 4.2     | 接触电阻(测试后)<br>(AFTER LIFE TEST):                      | ≤100mΩ                          |
| 4.3     | 开关容量(开关常切换)<br>CONTACT RATING (CONTACT RATING):      | 25mA 24VDC                      |
| 4.4     | 开关容量(开关不常切换)<br>CONTACT RATING (NON-CONTACT RATING): | 100mA                           |
| 4.5     | 绝缘电阻<br>INSULATION RESISTANCE:                       | ≥100MΩ .Min. at 500VDC          |
| 4.6     | 耐压强度<br>DIELECTRIC STRENGTH:                         | 500VAC Min. for 60 seconds. 1mA |
| 4.7     | 极际电容<br>CAPACITANCE BETWEEN ADJACENT SWITCHES:       | ≤5PF                            |

### 5. 机械特性 MECHANICAL

| 项目 ITEM |                          | 性能 PERFORMANCE  |
|---------|--------------------------|-----------------|
| 5.1     | 操作力<br>OPERATION FORCE:  | ≤8N             |
| 5.2     | 机械寿命<br>MECHANICAL LIFE: | 2000 operations |



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| 项目 ITME              |                                       |                     |           | 性能 PERFORMANCE                                   |                 |
| 5.3                  | 使用温度<br>OPERATING TEMPERATURE:        |                     |           | -20°C ~ +70°C                                    |                 |
| 5.4                  | 储存温度<br>STORAGE TEMPERATURE:          |                     |           | -40°C ~ +85°C                                    |                 |
| 5.5                  | 可焊性<br>SOLDERABILITY:                 |                     |           | After flux 230±5°C for 5±0.5seconds, 95%coverage |                 |
| 5.6                  | 耐焊接热<br>RESISTANCE TO SOLDERING HEAT: |                     |           | 260±5°C for 5±1seconds                           |                 |



6. 焊接和清洗 SOLDERING AND CLEANING PROCESSES

|     |   |   |
|-----|---|---|
| 6.1 | 在所有操作过程中, 请确保开关在OFF位置                               | Keep all switch contacts in their "OFF" position for all operations                                 |
| 6.2 | 波焊: 推荐焊接焊锡温度为500° F(260°C), 最多5秒                    | WAVE SOLDERING: Recommended solder temperature at 500° F(260°C) max.5 seconds                       |
| 6.3 | 手焊: 使用30W烙铁控制温度在350°C, 焊接时间大约5秒钟                    | HAND SOLDERING: Use a soldering iron of 30 Watts controlled at 350°C approximately 5 seconds. While |
| 6.4 | 回流焊: (SMT型) 回流炉最高温度为250°C, 温度为250°C时, 最长不超过10秒 (如图) | Reflow Soldering Profile: (reference)<br>   |

7. 产品包装 PACKING

| 7.1 | 所有拨码产品皆以IC管形式包装<br>HA系列包装资料<br>贴片型可采用盘带包装, 每卷为1000只  | All Code Switches are shipped in standard IC tube Packing of HA<br>SMT type can be shipper in Tape & Reel Packing, The quantity is 1000PCS/Reel |                   |                  |                           |                 |    |   |        |          |                           |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |    |       |         |    |    |       |         |  |
|-----|--|---|-------------------|------------------|---------------------------|-----------------|----|---|--------|----------|---------------------------|----|---|-------|---------|----|---|-------|---------|----|---|-------|---------|----|---|-------|---------|----|---|-------|---------|----|---|-------|---------|----|---|-------|---------|----|---|-------|---------|----|----|-------|---------|----|----|-------|---------|--|
|     | <table border="1"> <thead> <tr> <th>系列<br/>SERIES</th> <th>开关位数<br/>NO.of POS</th> <th>每管数量<br/>PER TUBE</th> <th>每小箱数量<br/>PER BOX</th> <th>外箱包装<br/>PER CTN</th> </tr> </thead> <tbody> <tr><td>HA</td><td>1</td><td>130PCS</td><td>13000PCS</td><td rowspan="12">6 BOXES<br/>55.5×30.5×40CM</td></tr> <tr><td>HA</td><td>2</td><td>77PCS</td><td>7700PCS</td></tr> <tr><td>HA</td><td>3</td><td>55PCS</td><td>5500PCS</td></tr> <tr><td>HA</td><td>4</td><td>42PCS</td><td>4200PCS</td></tr> <tr><td>HA</td><td>5</td><td>34PCS</td><td>3400PCS</td></tr> <tr><td>HA</td><td>6</td><td>29PCS</td><td>2900PCS</td></tr> <tr><td>HA</td><td>7</td><td>25PCS</td><td>2500PCS</td></tr> <tr><td>HA</td><td>8</td><td>22PCS</td><td>2200PCS</td></tr> <tr><td>HA</td><td>9</td><td>20PCS</td><td>2000PCS</td></tr> <tr><td>HA</td><td>10</td><td>18PCS</td><td>1800PCS</td></tr> <tr><td>HA</td><td>12</td><td>15PCS</td><td>1500PCS</td></tr> </tbody> </table> | 系列<br>SERIES  | 开关位数<br>NO.of POS | 每管数量<br>PER TUBE | 每小箱数量<br>PER BOX          | 外箱包装<br>PER CTN | HA | 1 | 130PCS | 13000PCS | 6 BOXES<br>55.5×30.5×40CM | HA | 2 | 77PCS | 7700PCS | HA | 3 | 55PCS | 5500PCS | HA | 4 | 42PCS | 4200PCS | HA | 5 | 34PCS | 3400PCS | HA | 6 | 29PCS | 2900PCS | HA | 7 | 25PCS | 2500PCS | HA | 8 | 22PCS | 2200PCS | HA | 9 | 20PCS | 2000PCS | HA | 10 | 18PCS | 1800PCS | HA | 12 | 15PCS | 1500PCS |  |
|     | 系列<br>SERIES   | 开关位数<br>NO.of POS   | 每管数量<br>PER TUBE  | 每小箱数量<br>PER BOX | 外箱包装<br>PER CTN           |                 |    |   |        |          |                           |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |    |       |         |    |    |       |         |  |
|     | HA   | 1   | 130PCS            | 13000PCS         | 6 BOXES<br>55.5×30.5×40CM |                 |    |   |        |          |                           |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |    |       |         |    |    |       |         |  |
|     | HA   | 2   | 77PCS             | 7700PCS          |                           |                 |    |   |        |          |                           |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |    |       |         |    |    |       |         |  |
|     | HA   | 3   | 55PCS             | 5500PCS          |                           |                 |    |   |        |          |                           |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |    |       |         |    |    |       |         |  |
|     | HA   | 4   | 42PCS             | 4200PCS          |                           |                 |    |   |        |          |                           |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |    |       |         |    |    |       |         |  |
|     | HA   | 5   | 34PCS             | 3400PCS          |                           |                 |    |   |        |          |                           |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |    |       |         |    |    |       |         |  |
|     | HA   | 6   | 29PCS             | 2900PCS          |                           |                 |    |   |        |          |                           |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |    |       |         |    |    |       |         |  |
|     | HA   | 7   | 25PCS             | 2500PCS          |                           |                 |    |   |        |          |                           |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |    |       |         |    |    |       |         |  |
|     | HA   | 8   | 22PCS             | 2200PCS          |                           |                 |    |   |        |          |                           |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |    |       |         |    |    |       |         |  |
|     | HA   | 9   | 20PCS             | 2000PCS          |                           |                 |    |   |        |          |                           |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |    |       |         |    |    |       |         |  |
| HA  | 10   | 18PCS   | 1800PCS           |                  |                           |                 |    |   |        |          |                           |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |    |       |         |    |    |       |         |  |
| HA  | 12   | 15PCS   | 1500PCS           |                  |                           |                 |    |   |        |          |                           |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |   |       |         |    |    |       |         |    |    |       |         |  |



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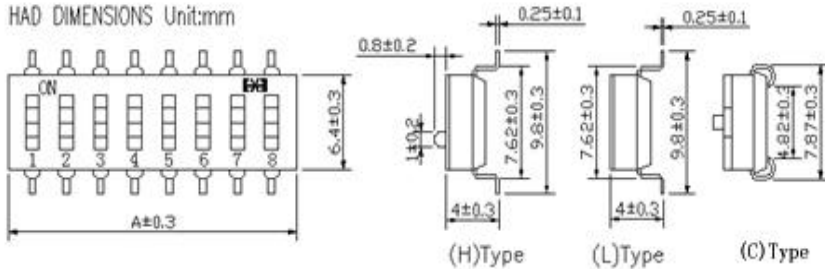
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8. 产品外形及装配图纸 SHAPE AND ASSEMBLY SIZE

DIMENSION A (General tolerance:  $\pm 0.3$ )

| POSITIONS | 1    | 2    | 3    | 4     | 5     | 6     | 7     | 8     | 9     | 10    | 12    |
|-----------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| A         | 3.64 | 6.18 | 8.72 | 11.26 | 13.80 | 16.34 | 18.88 | 21.42 | 23.96 | 26.50 | 31.58 |

HAD DIMENSIONS Unit:mm



| ITEM | DES      | MATERIALS            | TREATMENT    |
|------|----------|----------------------|--------------|
| 1    | COVER    | ENGINEERING PLASTICS | BLACK        |
| 2    | BASE     | ENGINEERING PLASTICS | BLACK        |
| 3    | KEY      | ENGINEERING PLASTICS | WHITE        |
| 4    | TERMINAL | ALLOY COPPER         | PLATING GOLD |

