



# 承 认 书

## APPROVAL SHEET

客户名称: \_\_\_\_\_

CUSTOMER

品 名: 薄膜片式电阻器

PARTNAME THIN FILM CHIP RESISTOR

T\*02  \* \* \*

T\*03  \* \* \*

T\*05  \* \* \*

T\*06  \* \* \*

T\*10  \* \* \*

T\*12  \* \* \*

规 格:

SPECIFICATION \_\_\_\_\_

版 本 号: R-1.0

VERSION

日 期:

DATE

|          |    |    |          |    |    |
|----------|----|----|----------|----|----|
| 制 造      |    |    | 客 户      |    |    |
| APPROVAL |    |    | APPROVAL |    |    |
| 拟制       | 审核 | 确认 | 检验       | 审核 | 批准 |
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| <b>修改记录</b>            |      |     |      |
|------------------------|------|-----|------|
| <b>REVISION RECORD</b> |      |     |      |
| 序号                     | 修改内容 | 检查人 | 发放日期 |
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| 序号<br>No | 目 录<br>TABLE OF CONTENTS       |
|----------|--------------------------------|
| 1.0      | 概述 Summary                     |
| 2.0      | 结构及尺寸 Structure And Dimensions |
| 3.0      | 型号规格表示办法 How To Order          |
| 4.0      | 电气性能 Performance Specification |
| 5.0      | 特性 Characteristics             |
| 6.0      | 包装 Package                     |
|          |                                |
|          |                                |
|          |                                |
|          |                                |
|          |                                |
|          |                                |
|          |                                |
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DH06-1229

### 1.0 概述 Summary

薄膜片式电阻主要生产的型号包括 0402、0603、0805、1206、2010、2512。其特点是：

The case size for thin film chip resistor including 0402、0603、0805、1206、2010、2512, and the features are as below:

#### ◆ 特长 Features

- 低温度系数 ( $\pm 5\text{PPM}/^\circ\text{C}$ )、低噪音
- 高精度 ( $\pm 0.01\% \sim \pm 1\%$ )
- 电性能稳定, 可靠性高
- 适应再流焊与波峰焊
- 装配成本低, 并与自动装
- 贴设备匹配
- 符合 ROHS 指令要求
- Low TCR ( $\pm 5\text{PPM}/^\circ\text{C}$ ) and low noise
- High accuracy ( $\pm 0.01\% \sim \pm 1\%$ )
- Stable electrical capability, high reliability
- Suit for re-flow and wave soldering
- Low assembly cost, suit for automatic SMT equipment
- Compliant with RoHS Directive

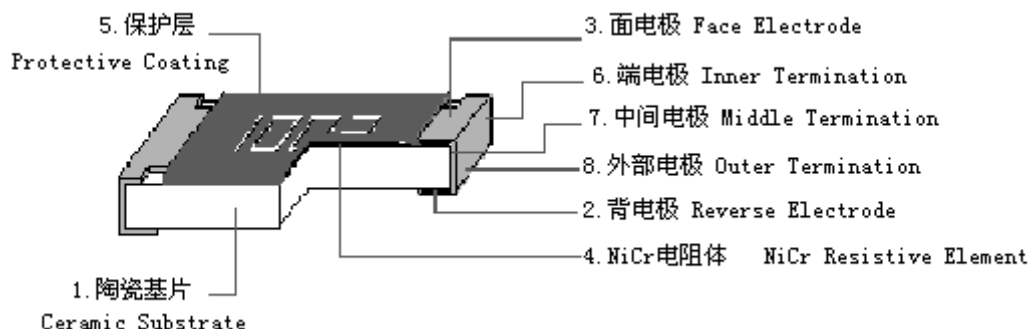
#### ◆ 应用领域 Applications

医学仪器、测试/测量设备、打印设备、自动设备控制器、转换器、通讯设备、手机等。

Medical Equipment、Test/Measurement Equipment、Printer Equipment、Automatic Equipment Controller、Converters、Communication Device、Mobile phone etc.

### 2.0 结构及尺寸 Structure And Dimensions

#### 2.1 结构 Structure



1. 陶瓷基片 Ceramic Substrate
2. 背电极 Reverse Electrode
3. 面电极 Face Electrode
4. NiCr 电阻体 NiCr Resistive Element
5. 保护层 Protective Coating
6. 端电极 Inner Termination
7. 中间电极 Middle Termination
8. 外部电极 Outer Termination



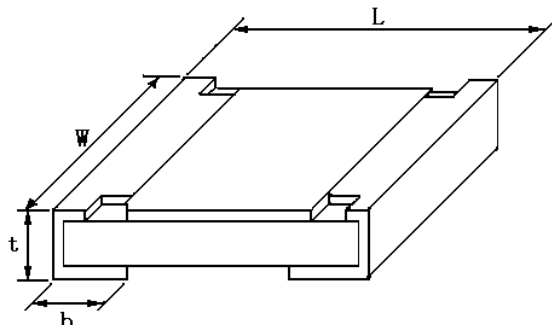
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版本号 Version of: R-1.0

T\*□□□□□□

DH06-1229

## 2.2 尺寸 Dimensions



| 型号 Type | L (mm)    | W (mm)    | t (mm)    | b (mm)    |
|---------|-----------|-----------|-----------|-----------|
| 0402    | 1.00±0.05 | 0.50±0.05 | 0.30±0.05 | 0.20±0.10 |
| 0603    | 1.55±0.10 | 0.80±0.10 | 0.45±0.10 | 0.30±0.20 |
| 0805    | 2.00±0.15 | 1.25±0.15 | 0.55±0.10 | 0.40±0.25 |
| 1206    | 3.05±0.15 | 1.55±0.15 | 0.55±0.10 | 0.35±0.25 |
| 2010    | 4.90±0.15 | 2.40±0.15 | 0.55±0.10 | 0.50±0.25 |
| 2512    | 6.30±0.15 | 3.10±0.15 | 0.55±0.10 | 0.50±0.25 |

## 2.3 产品外观 Appearance

2.3.1 电阻器表面保护膜覆盖完好且难以脱落,表面平整;

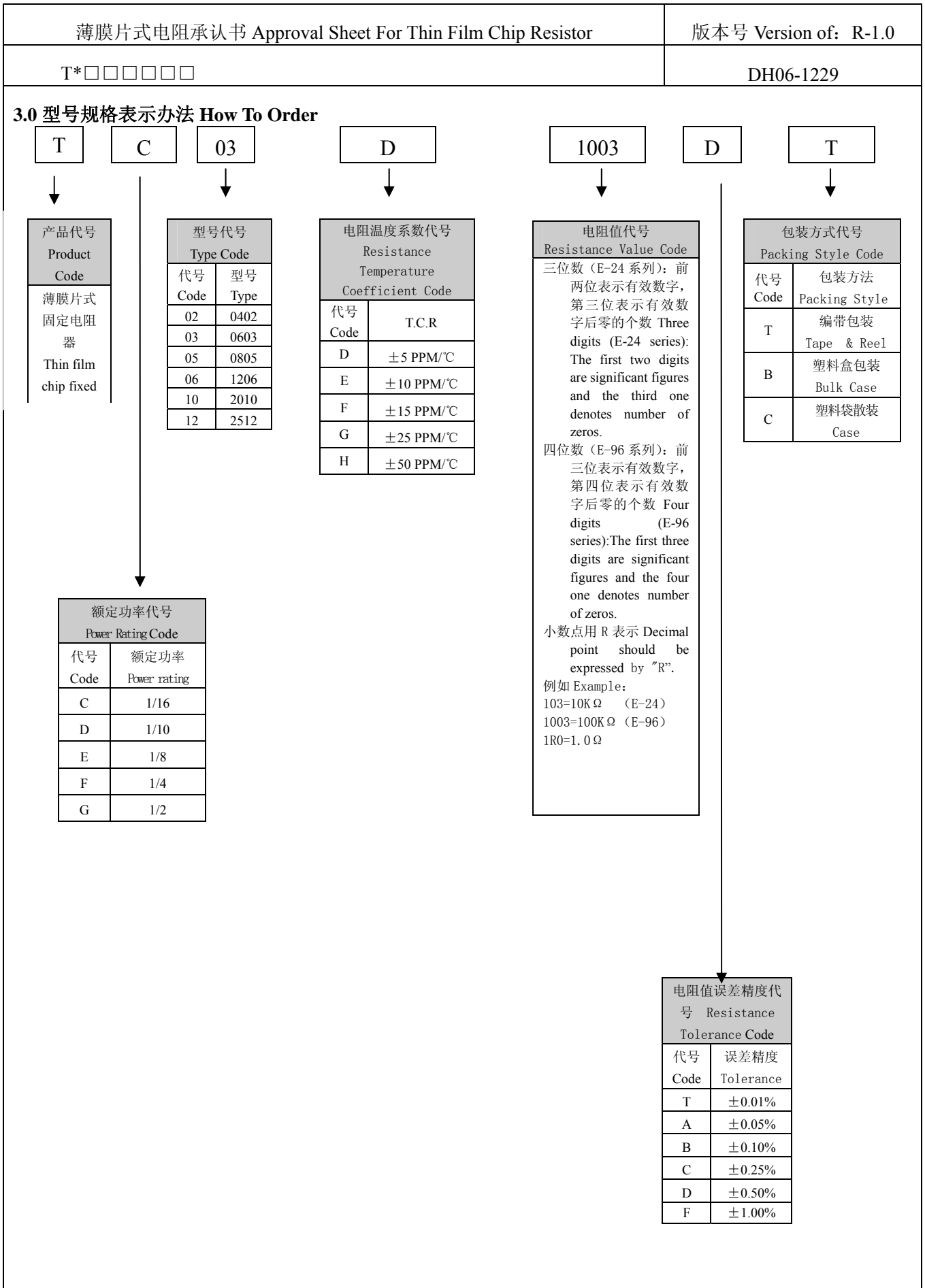
The surface of resistor is covered with Protecting Coating which hard to fade, and the surface of coating should avoid unevenness.

2.3.2 电阻器端电极覆盖均匀、镀层较难脱落、而且平整、无开裂、针孔、变色;

The terminal part is covered equable, the plating is hard to fade, and should avoid unevenness, flaw, pinhole and discoloration.

2.3.3 电阻器芯片无裂痕、标记可辨。





With a clear mark, the resistor body is crack-free.





|   |      |      |      |      |                       |      |      |
|---|------|------|------|------|-----------------------|------|------|
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| T*□□□□□□  |      |      |      |      | DH06-1229             |      |      |
| <p><b>3.1 标记表示方法 The Explanation For The Resistance Value Marking</b></p> <p>IEC E-24、E-96 系列电阻值对照表<br/>IEC E-24、E-96 Series Resistance Cross-reference List</p> <p style="text-align: center;">E-24 系列 ( E-24 series )<br/>(<math>\times 10^n \Omega</math>)</p> <p style="text-align: center;">(单位 unit: <math>1 \Omega</math>、<math>10 \Omega</math>、<math>100 \Omega</math>、<math>1K \Omega</math>、<math>10K \Omega</math>、<math>100K \Omega</math>、<math>1M \Omega</math>、<math>10M \Omega</math>)</p> <p style="text-align: center;">表一 Table one</p> |      |      |      |      |                       |      |      |
| 1.0   | 1.5  | 2.2  | 3.3  | 4.7  | 6.8                   |      |      |
| 1.1   | 1.6  | 2.4  | 3.6  | 5.1  | 7.5                   |      |      |
| 1.2   | 1.8  | 2.7  | 3.9  | 5.6  | 8.2                   |      |      |
| 1.3   | 2.0  | 3.0  | 4.3  | 6.2  | 9.1                   |      |      |
| <p style="text-align: center;">E-96 系列 (E-96 series)<br/>(<math>\times 10^n \Omega</math>)</p> <p style="text-align: center;">(单位: <math>1 \Omega</math>、<math>10 \Omega</math>、<math>100 \Omega</math>、<math>1K \Omega</math>、<math>10K \Omega</math>、<math>100K \Omega</math>、<math>1M \Omega</math>、<math>10M \Omega</math>)</p> <p style="text-align: center;">表二 Table two</p>   |      |      |      |      |                       |      |      |
| 1.00  | 1.33 | 1.78 | 2.37 | 3.16 | 4.22                  | 5.62 | 7.50 |
| 1.02  | 1.37 | 1.82 | 2.43 | 3.24 | 4.32                  | 5.76 | 7.68 |
| 1.05  | 1.40 | 1.87 | 2.49 | 3.32 | 4.42                  | 5.90 | 7.87 |
| 1.07  | 1.43 | 1.91 | 2.55 | 3.40 | 4.53                  | 6.04 | 8.06 |
| 1.10  | 1.47 | 1.96 | 2.61 | 3.48 | 4.64                  | 6.19 | 8.25 |
| 1.13  | 1.50 | 2.00 | 2.67 | 3.57 | 4.75                  | 6.34 | 8.45 |
| 1.15  | 1.54 | 2.05 | 2.74 | 3.65 | 4.87                  | 6.49 | 8.66 |
| 1.18  | 1.58 | 2.10 | 2.80 | 3.74 | 4.99                  | 6.65 | 8.87 |
| 1.21  | 1.62 | 2.15 | 2.87 | 3.83 | 5.11                  | 6.81 | 9.09 |
| 1.24  | 1.65 | 2.21 | 2.94 | 3.92 | 5.23                  | 6.98 | 9.31 |
| 1.27  | 1.69 | 2.26 | 3.01 | 4.02 | 5.36                  | 7.15 | 9.53 |
| 1.30  | 1.74 | 2.32 | 3.09 | 4.12 | 5.49                  | 7.32 | 9.76 |



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| T*□□□□□□   | DH06-1229             |
| <p>■E-24 系列：采用三位数字表示，前二位表示电阻值有效数字，第三位表示乘以 10 的次方数。<br/>E-24 series: Express resistance value on the glass side with three digits, the first tow digits should be significant and the third one denote number of zeros.<br/>例 For example:</p> <div style="text-align: center;">  <span style="margin-left: 100px;">→</span> <span>10K Ω</span> </div> <p>■E-96 系列：<br/>▲0805、1206、1210、1812、2010、2512 采用四位数字表示，前三位表示电阻值有效数字，第四位表示乘以 10 的次方数。<br/>E-96 series: For the dimension type of 0805,1206,2010,2512 express the resistance value with four digits, the first three digits are significant figures and the fourth denotes the number of zeros.<br/>例 For example:</p> <div style="text-align: center;">  <span style="margin-left: 100px;">→</span> <span>100 K Ω</span> </div> <p>▲0603 用三位代码表示，前二位表示 E-96 系列阻值代码，后一位字母表示乘数代码（见表三和表四）。<br/>For the dimension type of 0603, express the resistance value with three code, the first two digit code denote the resistance of E-96 series, and the third code of letter denote the multiplier (see the table three and four ).<br/>例 For example:</p> <div style="text-align: center;">  <span style="margin-left: 100px;">→</span> <span>2M Ω</span> </div> <p>■小数点以“R”表示 The decimal point should be expressed by “R”.<br/>例 For example:</p> <div style="text-align: center;">  <span style="margin-left: 100px;">→</span> <span>5.6 Ω</span> </div> <p>■非 IEC 标准系列的电阻值标记表示方法：一般以最接近 IEC E-24 系列标称阻值的标记表示方法。<br/>For the resistance which don't belong to IEC serial, use the resistance of IEC serial which is most close to the required resistance of non-IEC serial for replacement.</p> <p>■客户对标记有特殊要求时，则按照协商的结果印刷标记<br/>To get agreement by both party if there special requirement for the marking.</p> |                       |





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|--|---|------------------|---|---------------|---|---------------|---|---------------|
| T*□□□□□□   |   |                  |   |               |   |               | DH06-1229                                   |               |
| 表三 Table three:<br>E-96 系列阻值代码 E-96 series resistance value code |   |                  |   |               |   |               |   |               |
| 代号<br>code   | E-96 阻值<br>The resistance<br>of E-96 series | 代号<br>code       | E-96 阻值<br>The resistance of<br>E-96 series | 代号<br>code    | E-96 阻值<br>The resistance<br>of E-96 series | 代号<br>code    | E-96 阻值<br>The resistance of E-96<br>series |               |
| 01   | 100   | 25               | 178   | 49            | 316   | 73            | 562   |               |
| 02   | 102   | 26               | 182   | 50            | 324   | 74            | 576   |               |
| 03   | 105   | 27               | 187   | 51            | 332   | 75            | 590   |               |
| 04   | 107   | 28               | 191   | 52            | 340   | 76            | 604   |               |
| 05   | 110   | 29               | 196   | 53            | 348   | 77            | 619   |               |
| 06   | 113   | 30               | 200   | 54            | 357   | 78            | 634   |               |
| 07   | 115   | 31               | 205   | 55            | 365   | 79            | 649   |               |
| 08   | 118   | 32               | 210   | 56            | 374   | 80            | 665   |               |
| 09   | 121   | 33               | 215   | 57            | 383   | 81            | 681   |               |
| 10   | 124   | 34               | 221   | 58            | 392   | 82            | 698   |               |
| 11   | 127   | 35               | 226   | 59            | 402   | 83            | 715   |               |
| 12   | 130   | 36               | 232   | 60            | 412   | 84            | 732   |               |
| 13   | 133   | 37               | 237   | 61            | 422   | 85            | 750   |               |
| 14   | 137   | 38               | 243   | 62            | 432   | 86            | 768   |               |
| 15   | 140   | 39               | 249   | 63            | 442   | 87            | 787   |               |
| 16   | 143   | 40               | 255   | 64            | 453   | 88            | 806   |               |
| 17   | 147   | 41               | 261   | 65            | 464   | 89            | 825   |               |
| 18   | 150   | 42               | 267   | 66            | 475   | 90            | 845   |               |
| 19   | 154   | 43               | 274   | 67            | 487   | 91            | 866   |               |
| 20   | 158   | 44               | 280   | 68            | 499   | 92            | 887   |               |
| 21   | 162   | 45               | 287   | 69            | 511   | 93            | 909   |               |
| 22   | 165   | 46               | 294   | 70            | 523   | 94            | 931   |               |
| 23   | 169   | 47               | 301   | 71            | 536   | 95            | 953   |               |
| 24   | 174   | 48               | 309   | 72            | 549   | 96            | 976   |               |
| 表四 Table four:<br>乘数代码 Multiplied code                           |   |                  |   |               |   |               |   |               |
| 乘数次方<br>multiplier   | $\times 10^{-1}$                            | $\times 10^{-2}$ | $\times 10^0$                               | $\times 10^1$ | $\times 10^2$                               | $\times 10^3$ | $\times 10^4$                               | $\times 10^5$ |
| 代 码<br>code  | X   | Y                | A   | B             | C   | D             | E   | F             |



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| T*□□□□□□   | DH06-1229             |

## 4.0 电气性能 Performance Specification

## ◆额定值 Ratings

| 项目<br>Item<br>型号<br>Type | 额定功率<br>Power Rating<br>At 70°C | 最大工作电压<br>Max. Working<br>Voltage | 最大过负荷电压<br>Max. Overload<br>Voltage | 阻值误差精度<br>Resistance<br>Tolerance | 阻值范围<br>Resistance Range | 电阻温度系数<br>TCR (PPM/°C) | 使用温度范围<br>Operating<br>Temp. Range |
|--------------------------|---------------------------------|-----------------------------------|-------------------------------------|-----------------------------------|--------------------------|------------------------|------------------------------------|
| 0402                     | 1/16W                           | 25V                               | 50V                                 | ±0.10%<br>±0.25%<br>±0.50%        | 10 Ω~100K Ω              | ±25<br>±50             | -55°C~+155°C                       |
| 0603                     | 1/16W                           | 50V                               | 100V                                | ±0.10%<br>±0.25%<br>±0.50%        | 10 Ω~332K Ω              | ±25<br>±50             | -55°C~+155°C                       |
| 0805                     | 1/10W                           | 100V                              | 200V                                | ±0.10%<br>±0.25%<br>±0.50%        | 4.7 Ω~1M Ω               | ±25<br>±50             | -55°C~+155°C                       |
| 1206                     | 1/8W                            | 150V                              | 300V                                | ±0.10%<br>±0.25%<br>±0.50%        | 4.7 Ω~1M Ω               | ±25<br>±50             | -55°C~+155°C                       |
| 2010                     | 1/4W                            | 150V                              | 300V                                | ±0.10%<br>±0.25%<br>±0.50%        | 4.7 Ω~1M Ω               | ±25<br>±50             | -55°C~+155°C                       |
| 2512                     | 1/2W                            | 150V                              | 300V                                | ±0.10%<br>±0.25%<br>±0.50%        | 4.7 Ω~1M Ω               | ±25<br>±50             | -55°C~+155°C                       |

## ◆特殊额定值 Special Ratings

| 项目<br>Item<br>型号<br>Type | 额定功率<br>Power Rating<br>at 70°C | 最大工作电压<br>Max. Working<br>Voltage | 最大过负荷电压<br>Max. Overload<br>Voltage | 阻值误差精度<br>Resistance<br>Tolerance | 阻值范围<br>Resistance<br>Range | 电阻温度系数<br>TCR (PPM/<br>°C) | 使用温度范围<br>Operating<br>Temp. Range |
|--------------------------|---------------------------------|-----------------------------------|-------------------------------------|-----------------------------------|-----------------------------|----------------------------|------------------------------------|
| 0402                     | 1/16W                           | 25V                               | 50V                                 | ±0.01%<br>±0.05%<br>±0.10%        | 50 Ω~2K Ω                   | ±5                         | -55°C~+155°C                       |
|                          |                                 |                                   |                                     |                                   | 50 Ω~12K Ω                  | ±10<br>±15                 |                                    |
| 0603                     | 1/16W                           | 50V                               | 100V                                | ±0.01%<br>±0.05%<br>±0.10%        | 50 Ω~4K Ω                   | ±5                         | -55°C~+155°C                       |
|                          |                                 |                                   |                                     |                                   | 25 Ω~100K Ω                 | ±10<br>±15                 |                                    |
| 0805                     | 1/10W                           | 100V                              | 200V                                | ±0.01%<br>±0.05%<br>±0.10%        | 50 Ω~10K Ω                  | ±5                         | -55°C~+155°C                       |
|                          |                                 |                                   |                                     |                                   | 25 Ω~200K Ω                 | ±10<br>±15                 |                                    |
| 1206                     | 1/8W                            | 150V                              | 300V                                | ±0.01%<br>±0.05%<br>±0.10%        | 50 Ω~15K Ω                  | ±5                         | -55°C~+155°C                       |
|                          |                                 |                                   |                                     |                                   | 25 Ω~400K Ω                 | ±10<br>±15                 |                                    |
| 2010                     | 1/4W                            | 150V                              | 300V                                | ±0.01%<br>±0.05%<br>±0.10%        | 50 Ω~25K Ω                  | ±5                         | -55°C~+155°C                       |
|                          |                                 |                                   |                                     |                                   | 25 Ω~500K Ω                 | ±10<br>±15                 |                                    |
| 2512                     | 1/2W                            | 150V                              | 300V                                | ±0.01%<br>±0.05%<br>±0.10%        | 50 Ω~25K Ω                  | ±5                         | -55°C~+155°C                       |
|                          |                                 |                                   |                                     |                                   | 25 Ω~500K Ω                 | ±10<br>±15                 |                                    |

注：额定电压=√额定功率×标称电阻值 或最大工作电压中的较小值。

Note: Rated Voltage=√Power Rating×Resistance Value or Max. Working Voltage, whichever is lower.

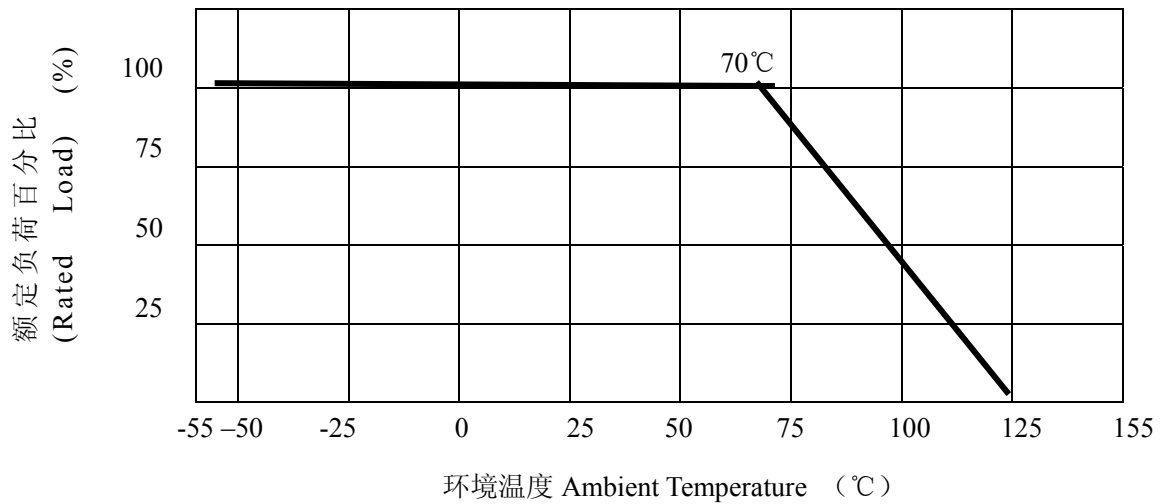


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◆负荷下降曲线 Power Derating Curve

使用温度范围  
Temperature Range of Use  
-55℃~+155℃



5.0 特性 Characteristics

| 项目<br>Item                              | 标准<br>Specification                         |  | 测试方法<br>Test Method   |
|---|---|--|---|
|   | 精度≤0.05%<br>Tol.≤0.05%                      | 精度>0.05%<br>Tol.>0.05%                     |   |
| 电阻温度系数<br>T.C.R                         | 在规定值内<br>within specified T.C.R             |  | <b>MIL-STD-202F Method 304</b><br>+25/-55/+25/+125/+25℃   |
| 短时间过负载<br>Short Time Overload           | $\Delta R \leq \pm (0.05\%R + 0.05 \Omega)$ | $\Delta R \leq \pm (0.5\%R + 0.05 \Omega)$ | <b>JIS-C-5202-7.2</b><br>2.5 倍额定电压或最大过负荷电压<br>(取最小者) 保持 5 秒<br>RCWV2.5 or Max Overload<br>Voltage, whichever is lower, for 5<br>seconds   |
| 绝缘耐压<br>Dielectric Withstand<br>Voltage | 在规定值内 within specified Value                |  | <b>MIL-STD-202F Method 301</b><br>施加 1 分钟最大过负荷电压<br>Apply Max Overload Voltage for 1<br>minute  |
| 绝缘电阻<br>Insulation Resistance           | 1000MΩ Min                                  |  | <b>MIL-STD-202F Method 302</b><br>在电极与基片间施加 100V 直流<br>电压,保持 1 分钟,然后测绝缘电阻<br>值 :Apply DC 100V between<br>substrate and termination for 1<br>minute, then check insulation<br>resistance |



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|--|---|---|---|
| T*□□□□□□   |   | DH06-1229                                   |   |
| 续 (continue)   |   |   |   |
| 项目<br>Item   | 标准<br>Specification                                   |   | 测试方法<br>Test Method   |
|  | 精度≤0.05%<br>Tol.≤0.05%                                | 精度>0.05%<br>Tol.>0.05%                      |   |
| 温度循环<br>Temperature<br>Cycling                       | $\Delta R \leq \pm (0.05\%R + 0.05 \Omega)$           | $\Delta R \leq \pm (0.25\%R + 0.05 \Omega)$ | <b>MIL-STD-202F Method 107G</b><br>-55℃~150℃ 100 个循环<br>-55℃~150℃ 100 cycles  |
| 70℃ 耐久性<br>Load Life                                 | $\Delta R \leq \pm (0.05\%R + 0.05 \Omega)$           | $\Delta R \leq \pm (0.2\%R + 0.05 \Omega)$  | <b>MIL-STD-202F Method 108A</b><br>70℃ 额定电压 通 1.5 小时,断 0.5 小时 1000 小时<br>70℃ Rated voltage 1.5h on/0.5h off 1000h               |
|  | $>7K \Omega \Delta R \leq \pm (0.5\%R + 0.05 \Omega)$ |   |   |
| 稳态湿热<br>Steady state<br>humidity                     | $\Delta R \leq \pm (0.05\%R + 0.05 \Omega)$           | $\Delta R \leq \pm (0.3\%R + 0.05 \Omega)$  | <b>MIL-STD-202F Method 103B</b><br>40℃±2℃ 90~95%RH 1000 小时<br>40℃±2℃ 90~95%RH 1000h   |
| 耐高温<br>Resistance to Dry<br>Heat                     | $\Delta R \leq \pm (0.05\%R + 0.05 \Omega)$           | $\Delta R \leq \pm (0.2\%R + 0.05 \Omega)$  | <b>JIS-C-5202-7.2</b><br>155℃ 96 小时<br>96 hours @155℃ without load  |
| 低温负载<br>Low Temperature<br>Operation                 | $\Delta R \leq \pm (0.05\%R + 0.05 \Omega)$           | $\Delta R \leq \pm (0.2\%R + 0.05 \Omega)$  | <b>JIS-C-5202-7.1</b><br>-65℃放置 1 小时,然后施加额定电压 45 分钟<br>1 Hour,-65℃,followed by 45minutes of RCWV                                |
| 端头强度<br>Bending Strength                             | $\Delta R \leq \pm 0.05\%$                            | $\Delta R \leq \pm 0.2\%$                   | <b>JIS-C-5202-6.1.4</b><br>保持时间(Duration):10s±1s<br>弯曲距离(Bending Distance):<br>0402、0603、0805、1206: 3mm;<br>1812、2010、2512: 1mm |
| 可焊性<br>Solder-ability                                | 可焊面积≥95%<br>95% Min coverage                          |   | <b>MIL-STD-202F Method 208H</b><br>235℃±5℃ 2±0.5 秒<br>235℃±5℃ 2s±0.5s   |
| 耐焊接热<br>Resistance to<br>Soldering Heat              | $\Delta R \leq \pm (0.05\%R + 0.05 \Omega)$           | $\Delta R \leq \pm (0.2\%R + 0.05 \Omega)$  | <b>MIL-STD-202F Method 210E</b><br>260℃±5℃ 10±1 秒<br>260℃±5℃ 10s±1s   |



T\*□□□□□□

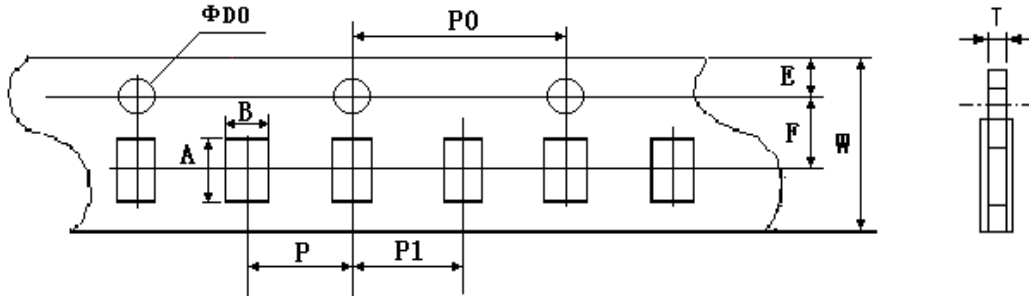
DH06-1229

6.0 包装 Package

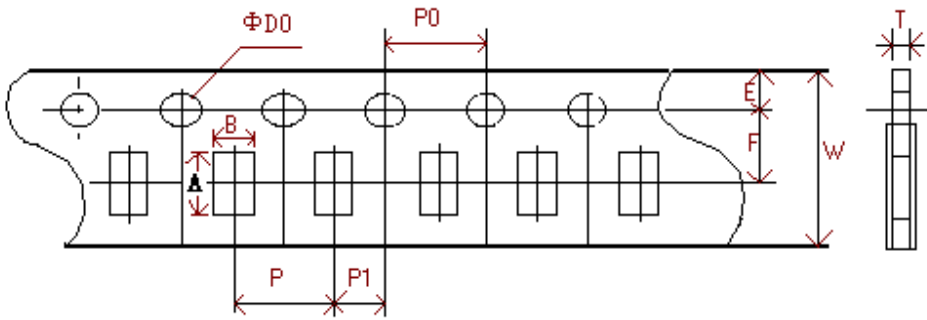
◆ 编带包装 Tape and reel

\* 纸带编带 Paper taping

0402:



0603、0805、1206:



单位 unit: mm

| 型号 Type | A        | B        | W        | F        | E        |
|---------|----------|----------|----------|----------|----------|
| 0402    | 1.20±0.1 | 0.70±0.1 | 8.0±0.20 | 3.5±0.05 | 1.75±0.1 |
| 0603    | 1.85±0.1 | 1.10±0.1 | 8.00±0.2 | 3.5±0.05 | 1.75±0.1 |
| 0805    | 2.35±0.1 | 1.65±0.1 | 8.0±0.20 | 3.5±0.05 | 1.75±0.1 |
| 1206    | 3.50±0.2 | 1.90±0.2 | 8.0±0.20 | 3.5±0.05 | 1.75±0.1 |

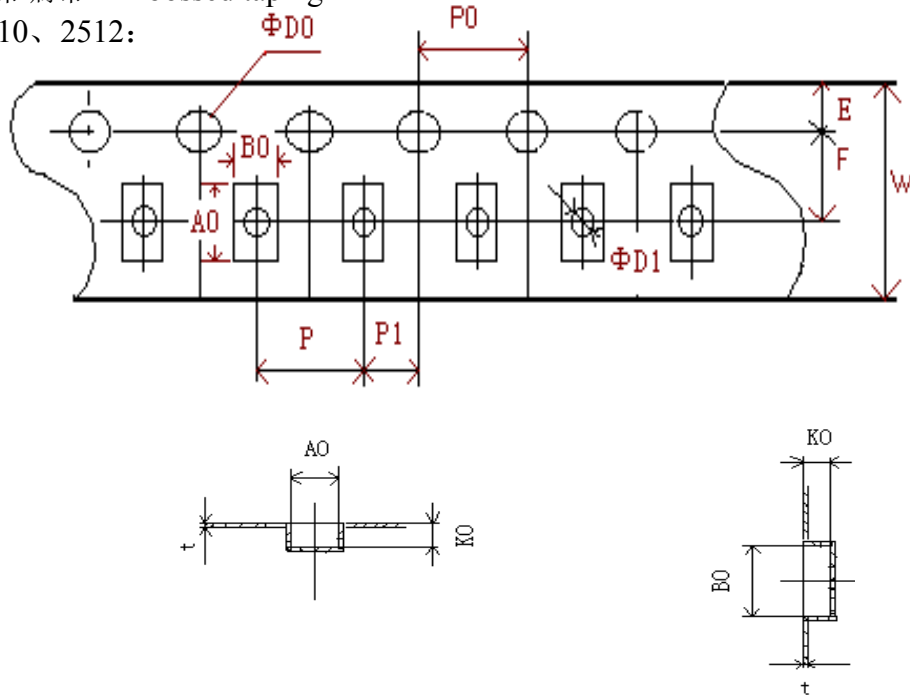
| 型号 Type | P        | P0      | P1       | ΦD0     | T        |
|---------|----------|---------|----------|---------|----------|
| 0402    | 2.0±0.05 | 4.0±0.1 | 2.0±0.05 | 1.5±0.1 | 0.6Max   |
| 0603    | 4.0±0.1  | 4.0±0.1 | 2.0±0.05 | 1.5±0.1 | 0.60±0.1 |
| 0805    | 4.0±0.1  | 4.0±0.1 | 2.0±0.05 | 1.5±0.1 | 0.75±0.1 |
| 1206    | 4.0±0.1  | 4.0±0.1 | 2.0±0.05 | 1.5±0.1 | 0.75±0.1 |



薄膜片式电阻承认书 Approval Sheet For Thin Film Chip Resistor 版本号 Version of: R-1.0

T\*□□□□□□ DH06-1229

\* 塑料带编带 Embossed tapping  
2010、2512:



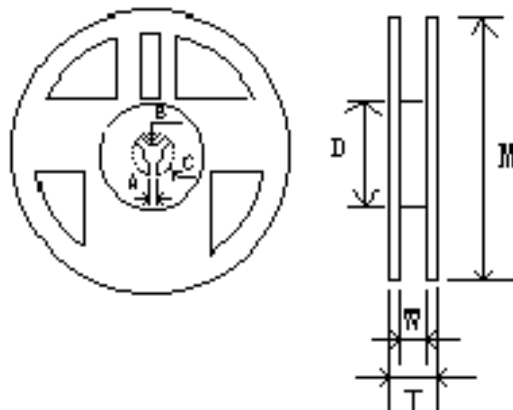
单位 unit: mm

| 型号 Type | A0        | B0        | W          | F         | E         | t         |
|---------|-----------|-----------|------------|-----------|-----------|-----------|
| 2010    | 5.45±0.10 | 2.77±0.10 | 12.00±0.10 | 5.50±0.10 | 1.75±0.10 | 0.24±0.05 |
| 2512    | 6.73±0.10 | 3.40±0.10 | 12.00±0.10 | 5.50±0.10 | 1.75±0.10 | 0.24±0.05 |

单位 unit: mm

| 型号 Type | P         | P0        | P1        | ΦD0          | ΦD1       | K0        |
|---------|-----------|-----------|-----------|--------------|-----------|-----------|
| 2010    | 4.00±0.10 | 4.00±0.10 | 2.00±0.05 | 1.50+0.10/-0 | 1.50±0.10 | 0.84±0.10 |
| 2512    | 4.00±0.10 | 4.00±0.10 | 2.00±0.05 | 1.50+0.10/-0 | 1.50±0.10 | 0.81±0.10 |

\* 卷盘 Reel





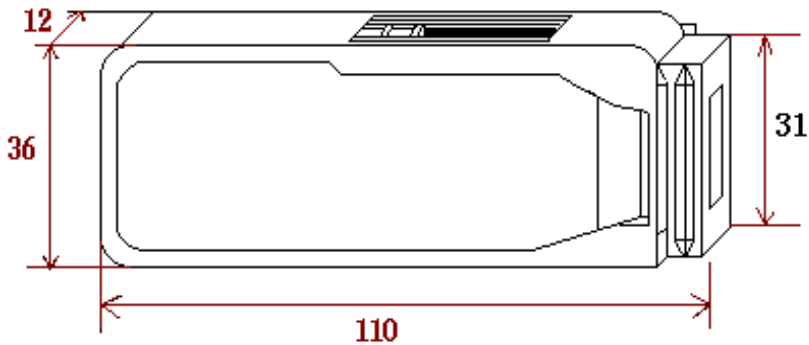
|  |                       |
|--|-----------------------|
| 薄膜片式电阻承认书 Approval Sheet For Thin Film Chip Resistor | 版本号 Version of: R-1.0 |
| T*□□□□□□   | DH06-1229             |

单位 unit: mm

| 型号 Type                      | M       | W        | T        | A       | B        | C        | D        |
|------------------------------|---------|----------|----------|---------|----------|----------|----------|
| 0402<br>0603<br>0805<br>1206 | 178±2.0 | 9.5±1.0  | 12.5±1.5 | 2.0±0.5 | 13.0±0.5 | 21.0±0.5 | 58.0±2.0 |
| 2010<br>2512                 | 178±2.0 | 13.0±0.5 | 15.5±1.5 | 2.0±0.5 | 13.0±0.5 | 21.0±0.5 | 57.0±2.0 |

◆ 塑料盒包装 Bulk case

单位 unit:mm



◆ 包装数量 Packaging quantity

单位 unit:pcs

| 包装方法<br>Packaging style | 编带<br>Tape and reel |                      |              | 塑料盒<br>Bulk case |       |       |      |      |      | 塑料袋散装<br>Bulk |                      |              |
|-------------------------|---------------------|----------------------|--------------|------------------|-------|-------|------|------|------|---------------|----------------------|--------------|
| 型号<br>Type              | 0402                | 0603<br>0805<br>1206 | 2010<br>2512 | 0402             | 0603  | 0805  | 1206 | 2010 | 2512 | 0402          | 0603<br>0805<br>1206 | 2010<br>2512 |
| 数量 (PCS)<br>Quantity    | 10000               | 5000                 | 4000         | 50000            | 25000 | 10000 | 5000 | 1500 | 1000 | ≤50000        | ≤10000               | ≤4000        |

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