丽智电子
LIZ Electronics

2022 / 2023

# PRODUCT CATALOGUE

DOPHNST 多福
电话：0755-23178910

昆山

南通

丽智电子于1988年在台湾土城成立，2000年于昆山设立丽智电子（昆山）有限公司，占地面积2万平方米，2016年成立丽智电子（南通）有限公司，占地10万平方米。

作为台湾金宝&仁宝集团的一员，公司秉持“领先、创新、完美”的理念，从事贴片电阻及芯片二极管的研发、生产、销售，并提供专业的服务。凭借先进的管理体系、优质的产品质量和完善的售后服务，丽智电子已经成为众多国内外知名企业的电子元器件供应商。

丽智电子元件用于工业计算机、汽车、消费电子、通信及医疗市场的各种类型的电子设备中。

百尺竿头更进一步，丽智致力于成为您最佳的元器件合作伙伴！

LIZ Electronics was established in Taiwan in 1988, and setup LIZ KunShan Factory in 2000, landed 20000m$^2$.In 2016, LIZ Nantong Factory is built,landed 100000 m$^2$.

As a member of Kinpo & Compal Group, LIZ focus on research & development、production、sales and professional service of chip resistors and chip diodes with the concept of "Lead、Intelligence and Zero”.LIZ is one of key electronic component suppliers for famous global companies.

LIZ products are applied in equipments of industrial computers、automobile、consumer electronics、telecomm and medical fields.

Good better best, never let it rest.Till good is better, but better best. LIZ will become your best partner for electronic components.

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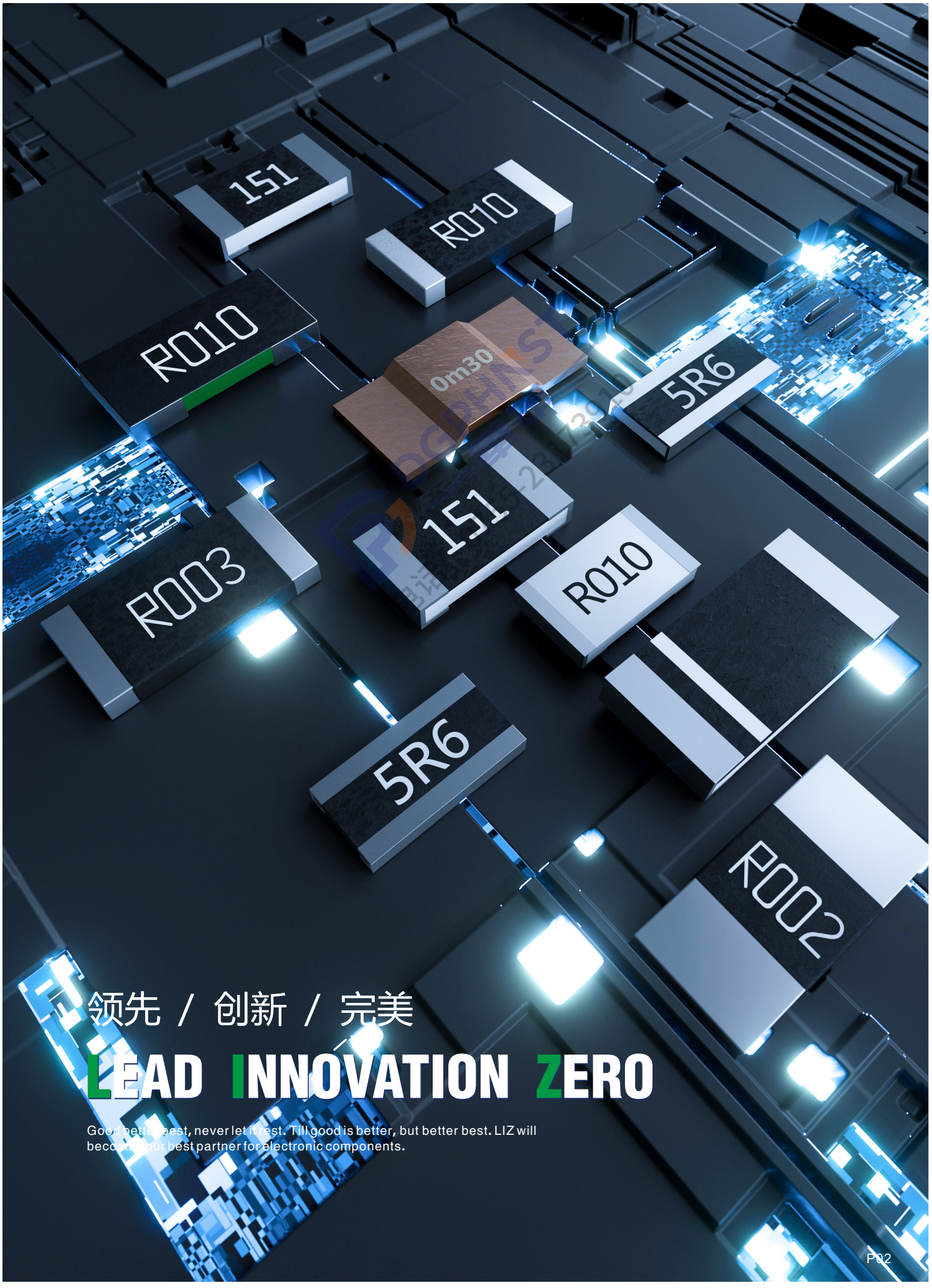


# 领先 / 创新 / 完美

# LEAD INNOVATION ZERO

Good better best, never let it rest. Till good is better, but better best. LIZ will become your best partner for electronic components.

丽智电子 LIZ Electronics

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DOPHIST 电话：0755-23113910

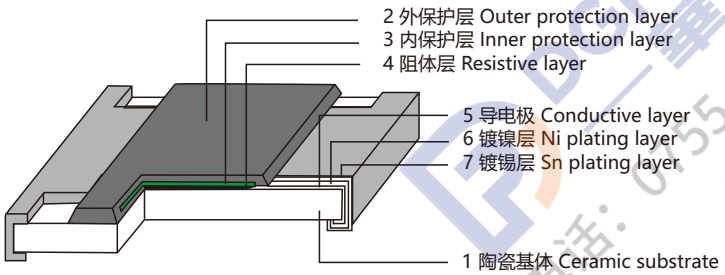
## 特性 Features

适合贴片机组装 Suitable for SMT
短小轻薄 Small Size & Light Weight
符合RoHS和无卤标准 Meet RoHS & HF Requirement

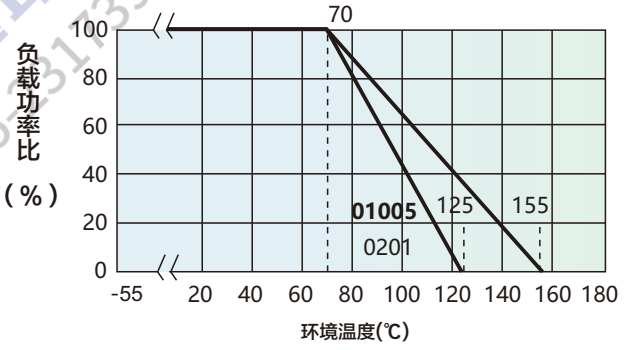
## 应用 Application

一般用途 General Purpose
通用型 Universal type

## 构造 Construction




## 功率衰减曲线 Power Derating Curve




## 订货方式（例如0603 5% 1/10W 100Ω）
## Ordering Procedure（Example 0603 1/10W 5% 100Ω）
## 料号（Part Number）：CR0603JA0101G

| CR | 0603 | J | A | 0101 | G |
|---|---|---|---|---|---|
| **类型（Type）**<br>CR：厚膜贴片电阻 (Thick Film Chip Resistors) | **尺寸（Size）**<br>1005<br>0201<br>0402<br>0603<br>0805<br>1206<br>1210<br>1812<br>2010<br>2512 | **公差 Tolerance**<br>B=±0.1%<br>D=±0.5%<br>F=±1%<br>G=±2%<br>J=±5%<br>K=±10% | **额定功率 Rated Power**<br>1=1W<br>2=3/4W<br>3=1/2W<br>4=1/4W<br>8=1/8W<br>A=1/10W<br>F=1/16W<br>H=1/20W<br>L=1/32W | **阻值 Resistance Value**<br>±1%,±0.5%<br>±0.1%<br>49R9=49.9Ω<br>1002=10KΩ<br>±2%,±5%:<br>06R8=6.8Ω<br>0564=560KΩ | **包装代码 Packing Code**<br>G= Reel (卷装)<br>S=10 inch reel 卷装<br>U=13 inch reel 卷装<br>V= bulk （散料） |

## 标准包装数量 Standard Packing Quantity

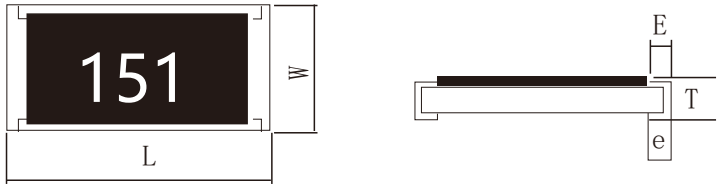
| | |
|---|---|
| 01005 | 20,000Pcs Per Reel(每卷20，000Pcs) |
| 0201/0402： | 10,000Pcs Per Reel(每卷10，000Pcs) |
| 0603/0805/1206/1210： | 5,000Pcs Per Reel(每卷5，000Pcs) |
| 1812/2010/2512： | 4,000Pcs Per Reel(每卷4，000Pcs) |

**备　　注：**1005为01005规格
**Remark:** 1005 is 01005 size

## 规格 Specifications

| 类型 Type | CR1005 | CR0201 | CR0402 | CR0603 | CR0805 | CR1206 | CR1210 | CR1812 | CR2010 | CR2512 |
|---|---|---|---|---|---|---|---|---|---|---|
| 额定功率 70℃Rated Power at 70℃ | 1/32W | 1/20W | 1/16W | 1/10W | 1/8W | 1/4W | 1/2W | 1/2W | 3/4W | 1W |
| 最大工作電壓 Max Working Voltage | 15V | 25V | 50V | 75V | 150V | 200V | 200V | 200V | 200V | 200V |
| 最大過負荷電壓 Max Overload Voltage | 30V | 50V | 100V | 150V | 300V | 400V | 500V | 500V | 500V | 500V |
| 绝缘耐压 Dielectric WithStanding Voltage | 30V | 75V | 150V | 220V | 430V | 570V | 710V | 710V | 710V | 710V |
| 操作温度范围 Operating Temperature | -55～+125℃ | -55～+125℃ | -55～+155℃ | -55～+155℃ | -55～+155℃ | -55～+155℃ | -55～+155℃ | -55～+155℃ | -55～+155℃ | -55～+155℃ |
| 零欧姆电阻阻值 Resistance Value of Jumper | ‹ 50mΩ | ‹ 50mΩ | ‹ 50mΩ | ‹ 50mΩ | ‹ 50mΩ | ‹ 50mΩ | ‹ 50mΩ | ‹ 50mΩ | ‹ 50mΩ | ‹ 50mΩ |
| 零欧姆额定电流 Rated Current of Jumper | 0.5A | 0.5A | 1.0A | 1.0A | 2.0A | 2.0A | 2.0A | 2.0A | 2.0A | 2.0A |
| 零欧姆电阻最大电流 Max Current of Jumper | 1.0A | 1.0A | 2.0A | 2.0A | 5.0A | 10.0A | 10.0A | 10.0A | 10.0A | 10.0A |
| 0.5%阻值范围 Resistance Range of 0.5% | - | - | 10Ω-1MΩ | 10Ω-1MΩ | 10Ω-1MΩ | 10Ω-1MΩ | 10Ω-1MΩ | 10Ω-1MΩ | 10Ω-1MΩ | 10Ω-1MΩ |
| 1%阻值范围 Resistance Range of 1% | 1Ω-10MΩ | 1Ω-10MΩ | 1Ω～22MΩ | 1Ω～22MΩ | 1Ω～22MΩ | 1Ω～22MΩ | 1Ω～22MΩ | 1Ω-10MΩ | 1Ω～22MΩ | 1Ω～22MΩ |
| 2%阻值范围 Resistance Range of 2% | 1Ω-10MΩ | 1Ω-10MΩ | 1Ω～22MΩ | 1Ω～22MΩ | 1Ω～22MΩ | 1Ω～22MΩ | 1Ω～22MΩ | 1Ω-10MΩ | 1Ω～22MΩ | 1Ω～22MΩ |
| 5%阻值范围 Resistance Range of 5% | 1Ω-10MΩ | 1Ω-10MΩ | 1Ω～22MΩ | 1Ω～100MΩ | 1Ω～100MΩ | 1Ω～100MΩ | 1Ω～100MΩ | 1Ω-10MΩ | 1Ω～100MΩ | 1Ω～100MΩ |

## 外形尺寸 Dimension




| 类型 Type | | CR1005 | CR0201 | CR0402 | CR0603 | CR0805 | CR1206 | CR1210 | CR1812 | CR2010 | CR2512 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 尺寸 Dimension | L(mm) | 0.40±0.02 | 0.60±0.03 | 1.00±0.05 | 1.60±0.10 | 2.00±0.15 | 3.10±0.15 | 3.10±0.15 | 4.50±0.20 | 5.00±0.20 | 6.25±0.20 |
| | W(mm) | 0.20±0.02 | 0.30±0.03 | 0.50±0.05 | 0.80±0.10 | 1.25±0.15 | 1.60±0.15 | 2.50±0.15 | 3.10±0.20 | 2.50±0.20 | 3.10±0.20 |
| | T(mm) | 0.13±0.02 | 0.23±0.03 | 0.30±0.05 | 0.45±0.10 | 0.50±0.10 | 0.55±0.10 | 0.55±0.15 | 0.55±0.15 | 0.55±0.15 | 0.55±0.15 |
| | E(mm) | 0.10±0.03 | 0.10±0.05 | 0.15±0.10 | 0.25±0.20 | 0.35±0.20 | 0.45±0.25 | 0.35±0.25 | 0.55±0.20 | 0.65±0.25 | 0.85±0.25 |
| | e(mm) | 0.11±0.03 | 0.15±0.05 | 0.20±0.10 | 0.30±0.20 | 0.40±0.20 | 0.40±0.25 | 0.60±0.25 | 0.70±0.20 | 0.50±0.25 | 0.95±0.25 |

DGPHNST 晶华 电话：0755-23173910

## 性能 Performance Specifications

| 内容 Item | 测试方法 Test Methods | 规格 Specification Limits |
|---|---|---|
| 温度系数<br>Temperature Coefficient | JIS C5201 4.8 | 01005规格:<br>1Ω≤R≤10Ω: -200～+600 PPM/℃<br>10Ω＜R≤10MΩ: ±250 PPM/℃<br>0201规格:<br>1Ω≤R≤10Ω: -100～+300 PPM/℃<br>10Ω＜R≤10MΩ: ±200 PPM/℃<br>0402～2512规格:<br>1Ω≤R≤10Ω: ±200PPM/℃<br>10Ω＜R≤10MΩ: ±100 PPM/℃<br>10MΩ＜R≤100MΩ: ±200 PPM/℃ |
| 焊锡性<br>Solderability | JIS C5201 4.17 | 最少95%面积上锡 Min 95% coverage |
| 绝缘电阻<br>Insulation Resistance | JIS C5201 4.6 | ＞10GΩ |
| 绝缘耐压<br>Dielectric Withstanding Voltage | JIS C5201 4.7 | 无击穿、飞弧及可见机械性损伤<br>No evidence of flashover,mechanical damage arcing or insulation breakdown |
| 短时间过负荷<br>Short-Time Overload | JIS C5201 4.13 | ±(1.0%+0.05Ω)Max(最大) |
| 端子弯曲<br>Terminal Bending | JIS C5201 4.33 | ±(1.0%+0.05Ω)Max(最大) |
| 抗焊锡热<br>Resist to Soldering Heat | JIS C5201 4.18 | ±(1.0%+0.05Ω)Max(最大) |
| 负荷寿命<br>Load Life | JIS C5201 4.25.1 | 01005规格: ±(5.0%+0.05Ω)Max(最大)<br>0201~2512规格: ±(2.0%+0.05Ω)Max(最大) |
| 耐湿特性<br>Humidity | JIS C5201 4.24 | ±(2.0%+0.05Ω)Max(最大) |
| 温度循环<br>Temperature Cycling | JIS C5201 4.19 | ±(2.0%+0.05Ω)Max(最大) |
| 温湿循环<br>Moisture Resistance | MIL-STD-202<br>METHOD106 | ±(2.0%+0.05Ω)Max(最大) |

DGPHNS 肇年电子 电话: 0755-23173910

# 电阻本体字码标示 Mark on the Resistors Body

- ❖ 01005、0201及0402因本体太小，本体上无字码标示
  For 01005、0201 and 0402 size,no marking on the body due to the small size of the resistor
- ❖ 公差±5%的产品，以三字码标示，前两位表示阻值的有效数字，最后一位表示的10的乘幂
  ±5%,Tolerance product:the marking is 3 digits,the first 2 digits are significant figures of resistance value and the 3rd one denotes the power number of 10,(10×)
- ❖ ±0.5%,±1%的产品，以四字码标示，前三位表示阻值的有效数字，最后一位表示10的乘幂
  ±0.5%,±1% tolerance product:the marking is 4 digits,the first 3 digits are significant figures of resistance value and the 4th one denotes the power number of 10,(10×)
- ❖ 0603±1% E96系列的标准阻值，因电阻本体太小，采用三位代码标示.
  Standard E96 series values of 0603±1%:due to the small size of the resistor's body,use 3digits code to indicate the resistance value.

| | |
|---|---|
| 472 | 472=47×10 $^{2}$=4.7KΩ |
| 5R6 | 10Ω以下标示：5R6=5.6Ω<br>Below 10Ω：5R6=5.6Ω |
| 4992 | 4992=499×10 $^{2}$=49.9KΩ |
| 6R81 | 100Ω以下标示：6R81=6.81Ω<br>Below 100Ω：6R81=6.81Ω |

## E24系列的标准阻值代码 Standard E24 series Resistance Code

1.0、1.1、1.2、1.3、1.5、1.6、1.8、2.0、2.2、2.4、2.7、3.0、3.3、3.6、3.9、4.3、4.7、5.1、5.6、6.2、6.8、7.5、8.2、9.1

## 0603±1% E96系列的标准阻值代码
## Standard E96 Series Resistance Value Code For 0603±1% Marking

| 代码 Code | 阻值 Value | 代码 Code | 阻值 Value | 代码 Code | 阻值 Value | 代码 Code | 阻值 Value | 代码 Code | 阻值 Value | 代码 Code | 阻值 Value |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 100 | 17 | 147 | 33 | 215 | 49 | 316 | 65 | 464 | 81 | 681 |
| 02 | 102 | 18 | 150 | 34 | 221 | 50 | 324 | 66 | 475 | 82 | 698 |
| 03 | 105 | 19 | 154 | 35 | 226 | 51 | 332 | 67 | 487 | 83 | 715 |
| 04 | 107 | 20 | 158 | 36 | 232 | 52 | 340 | 68 | 499 | 84 | 732 |
| 05 | 110 | 21 | 162 | 37 | 237 | 53 | 348 | 69 | 511 | 85 | 750 |
| 06 | 113 | 22 | 165 | 38 | 243 | 54 | 357 | 70 | 523 | 86 | 768 |
| 07 | 115 | 23 | 169 | 39 | 249 | 55 | 365 | 71 | 536 | 87 | 787 |
| 08 | 118 | 24 | 174 | 40 | 255 | 56 | 374 | 72 | 549 | 88 | 806 |
| 09 | 121 | 25 | 178 | 41 | 261 | 57 | 383 | 73 | 562 | 89 | 825 |
| 10 | 124 | 26 | 182 | 42 | 267 | 58 | 392 | 74 | 576 | 90 | 845 |
| 11 | 127 | 27 | 187 | 43 | 274 | 59 | 402 | 75 | 590 | 91 | 866 |
| 12 | 130 | 28 | 191 | 44 | 280 | 60 | 412 | 76 | 604 | 92 | 887 |
| 13 | 133 | 29 | 196 | 45 | 287 | 61 | 422 | 77 | 619 | 93 | 909 |
| 14 | 137 | 30 | 200 | 46 | 294 | 62 | 432 | 78 | 634 | 94 | 931 |
| 15 | 140 | 31 | 205 | 47 | 301 | 63 | 442 | 79 | 649 | 95 | 953 |
| 16 | 143 | 32 | 210 | 48 | 309 | 64 | 453 | 80 | 665 | 96 | 976 |

## 0603±1% E96系列的指数代码 Multiplier Code For 0603±1% Marking

| 代码 Code | Y | X | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|---|---|
| 指数 Multiplier | $10^{-2}$ | $10^{-1}$ | $10^{0}$ | $10^{1}$ | $10^{2}$ | $10^{3}$ | $10^{4}$ | $10^{5}$ | $10^{6}$ |

阻值标示如下 So the resistance value are marked as the following examples

10D 10D=124×10 $^{3}$=124KΩ

38Y 38Y=243×10 $^{-2}$=2.43Ω

**0603±1%的产品，在标准E24系列中，但不属于E96系列，标示与5%的字码相同，但是在字码下加一条线**
**Standard E24 and not belong to E96 series values of 0603±1%,the marking is the same as 5% tolerance but marking as underline**

331 331=33×10 $^{1}$=330Ω

560 560=56×10 $^{0}$=56Ω

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**下表列出每种系列的标准阻值，表中的阻值是按照通用倍率得出的接近阻值。**
**The below chart shows the nominal resistance value for each series. The values in the chart have been in this order using the approximate values that are based on the common ratios given in the following table.**

| Series 系列 | Common Ratio 通用倍率 | Remarks 备注 |
|---|---|---|
| E-6 | $\sqrt[6]{10}$(1.46) | Rounded off to a 2-digit figure(2位有效数字) |
| E-12 | $\sqrt[12]{10}$(1.21) | Rounded off to a 2-digit figure(2位有效数字) |
| E-24 | $\sqrt[24]{10}$(1.10) | Rounded off to a 2-digit figure(2位有效数字) |
| E-96 | $\sqrt[96]{10}$(1.02) | Rounded off to a 3-digit figure(3位有效数字) |

| E-6 | E-12 | E-24 | E-96 |
|---|---|---|---|
| 1.0 | 1.0 | 1.0 | 1.00 |
| | | | 1.02 |
| | | | 1.05 |
| | | | 1.07 |
| | | 1.1 | 1.10 |
| | | | 1.13 |
| | | | 1.15 |
| | | | 1.18 |
| | 1.2 | 1.2 | 1.21 |
| | | | 1.24 |
| | | | 1.27 |
| | | | 1.30 |
| | | 1.3 | 1.33 |
| | | | 1.37 |
| | | | 1.40 |
| | | | 1.43 |
| 1.5 | 1.5 | 1.5 | 1.47 |
| | | | 1.50 |
| | | | 1.54 |
| | | | 1.58 |
| | | 1.6 | 1.62 |
| | | | 1.65 |
| | | | 1.69 |
| | | | 1.74 |
| | 1.8 | 1.8 | 1.78 |
| | | | 1.82 |
| | | | 1.87 |
| | | | 1.91 |
| | | 2.0 | 1.96 |
| | | | 2.00 |
| | | | 2.05 |
| | | | 2.10 |

| E-6 | E-12 | E-24 | E-96 |
|---|---|---|---|
| 2.2 | 2.2 | 2.2 | 2.15 |
| | | | 2.21 |
| | | | 2.26 |
| | | | 2.32 |
| | | 2.4 | 2.37 |
| | | | 2.43 |
| | | | 2.49 |
| | | | 2.55 |
| | 2.7 | 2.7 | 2.61 |
| | | | 2.67 |
| | | | 2.74 |
| | | | 2.80 |
| | | 3.0 | 2.87 |
| | | | 2.94 |
| | | | 3.01 |
| | | | 3.09 |
| 3.3 | 3.3 | 3.3 | 3.16 |
| | | | 3.24 |
| | | | 3.32 |
| | | | 3.40 |
| | | 3.6 | 3.48 |
| | | | 3.57 |
| | | | 3.65 |
| | | | 3.74 |
| | 3.9 | 3.9 | 3.83 |
| | | | 3.92 |
| | | | 4.02 |
| | | | 4.12 |
| | | 4.3 | 4.22 |
| | | | 4.32 |
| | | | 4.42 |
| | | | 4.53 |

| E-6 | E-12 | E-24 | E-96 |
|---|---|---|---|
| 4.7 | 4.7 | 4.7 | 4.64 |
| | | | 4.75 |
| | | | 4.87 |
| | | | 4.99 |
| | | 5.1 | 5.11 |
| | | | 5.23 |
| | | | 5.36 |
| | | | 5.49 |
| | 5.6 | 5.6 | 5.62 |
| | | | 5.76 |
| | | | 5.90 |
| | | | 6.04 |
| | | 6.2 | 6.19 |
| | | | 6.34 |
| | | | 6.49 |
| | | | 6.65 |
| 6.8 | 6.8 | 6.8 | 6.81 |
| | | | 6.98 |
| | | | 7.15 |
| | | | 7.32 |
| | | 7.5 | 7.50 |
| | | | 7.68 |
| | | | 7.87 |
| | | | 8.06 |
| | 8.2 | 8.2 | 8.25 |
| | | | 8.45 |
| | | | 8.66 |
| | | | 8.87 |
| | | 9.1 | 9.09 |
| | | | 9.31 |
| | | | 9.53 |
| | | | 9.76 |

DGPHYST 一辈子一 电话：0755-23173910

# 标准电阻值 Standard Nominal Resistance Values

**标E-24 series standard resistance value & the codes to be used in the part NO.system 5% &10% tolerance (4 digits,start with "O"):**
**E-24 系列标准阻值和料号系统使用代码（4位，以0为首位，5%、10%公差）：**

| 阻值 Value | 代码 Code | 阻值 Value | 代码 Code | 阻值 Value | 代码 Code | 阻值 Value | 代码 Code | 阻值 Value | 代码 Code | 阻值 Value | 代码 Code | 阻值 Value | 代码 Code |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.0Ω | 01R0 | 10Ω | 0100 | 100Ω | 0101 | 1.0KΩ | 0102 | 10KΩ | 0103 | 100KΩ | 0104 | 1.0MΩ | 0105 |
| 1.1Ω | 01R1 | 11Ω | 0110 | 110Ω | 0111 | 1.1KΩ | 0112 | 11KΩ | 0113 | 110KΩ | 0114 | 1.1MΩ | 0115 |
| 1.2Ω | 01R2 | 12Ω | 0120 | 120Ω | 0121 | 1.2KΩ | 0122 | 12KΩ | 0123 | 120KΩ | 0124 | 1.2MΩ | 0125 |
| 1.3Ω | 01R3 | 13Ω | 0130 | 130Ω | 0131 | 1.3KΩ | 0132 | 13KΩ | 0133 | 130KΩ | 0134 | 1.3MΩ | 0135 |
| 1.5Ω | 01R5 | 15Ω | 0150 | 150Ω | 0151 | 1.5KΩ | 0152 | 15KΩ | 0153 | 150KΩ | 0154 | 1.5MΩ | 0155 |
| 1.6Ω | 01R6 | 16Ω | 0160 | 160Ω | 0161 | 1.6KΩ | 0162 | 16KΩ | 0163 | 160KΩ | 0164 | 1.6MΩ | 0165 |
| 1.8Ω | 01R8 | 18Ω | 0180 | 180Ω | 0181 | 1.8KΩ | 0182 | 18KΩ | 0183 | 180KΩ | 0184 | 1.8MΩ | 0185 |
| 2.0Ω | 02R0 | 20Ω | 0200 | 200Ω | 0201 | 2.0KΩ | 0202 | 20KΩ | 0203 | 200KΩ | 0204 | 2.0MΩ | 0205 |
| 2.2Ω | 02R2 | 22Ω | 0220 | 220Ω | 0221 | 2.2KΩ | 0222 | 22KΩ | 0223 | 220KΩ | 0224 | 2.2MΩ | 0225 |
| 2.4Ω | 02R4 | 24Ω | 0240 | 240Ω | 0241 | 2.4KΩ | 0242 | 24KΩ | 0243 | 240KΩ | 0244 | 2.4MΩ | 0245 |
| 2.7Ω | 02R7 | 27Ω | 0270 | 270Ω | 0271 | 2.7KΩ | 0272 | 27KΩ | 0273 | 270KΩ | 0274 | 2.7MΩ | 0275 |
| 3.0Ω | 03R0 | 30Ω | 0300 | 300Ω | 0301 | 3.0KΩ | 0302 | 30KΩ | 0303 | 300KΩ | 0304 | 3.0MΩ | 0305 |
| 3.3Ω | 03R3 | 33Ω | 0330 | 330Ω | 0331 | 3.3KΩ | 0332 | 33KΩ | 0333 | 330KΩ | 0334 | 3.3MΩ | 0335 |
| 3.6Ω | 03R6 | 36Ω | 0360 | 360Ω | 0361 | 3.6KΩ | 0362 | 36KΩ | 0363 | 360KΩ | 0364 | 3.6MΩ | 0365 |
| 3.9Ω | 03R9 | 39Ω | 0390 | 390Ω | 0391 | 3.9KΩ | 0392 | 39KΩ | 0393 | 390KΩ | 0394 | 3.9MΩ | 0395 |
| 4.3Ω | 04R3 | 43Ω | 0430 | 430Ω | 0431 | 4.3KΩ | 0432 | 43KΩ | 0433 | 430KΩ | 0434 | 4.3MΩ | 0435 |
| 4.7Ω | 04R7 | 47Ω | 0470 | 470Ω | 0471 | 4.7KΩ | 0472 | 47KΩ | 0473 | 470KΩ | 0474 | 4.7MΩ | 0475 |
| 5.1Ω | 05R1 | 51Ω | 0510 | 510Ω | 0511 | 5.1KΩ | 0512 | 51KΩ | 0513 | 510KΩ | 0514 | 5.1MΩ | 0515 |
| 5.6Ω | 05R6 | 56Ω | 0560 | 560Ω | 0561 | 5.6KΩ | 0562 | 56KΩ | 0563 | 560KΩ | 0564 | 5.6MΩ | 0565 |
| 6.2Ω | 06R2 | 62Ω | 0620 | 620Ω | 0621 | 6.2KΩ | 0622 | 62KΩ | 0623 | 620KΩ | 0624 | 6.2MΩ | 0625 |
| 6.8Ω | 06R8 | 68Ω | 0680 | 680Ω | 0681 | 6.8KΩ | 0682 | 68KΩ | 0683 | 680KΩ | 0684 | 6.8MΩ | 0685 |
| 7.5Ω | 07R5 | 75Ω | 0750 | 750Ω | 0751 | 7.5KΩ | 0752 | 75KΩ | 0753 | 750KΩ | 0754 | 7.5MΩ | 0755 |
| 8.2Ω | 08R2 | 82Ω | 0820 | 820Ω | 0821 | 8.2KΩ | 0822 | 82KΩ | 0823 | 820KΩ | 0824 | 8.2MΩ | 0825 |
| 9.1Ω | 09R1 | 91Ω | 0910 | 910Ω | 0911 | 9.1KΩ | 0912 | 91KΩ | 0913 | 910KΩ | 0914 | 9.1MΩ | 0915 |
| | | | | | | | | | | | | 10MΩ | 0106 |

**E-96 series standard resistance value & the codes to be used in the part NO.system not over 2% tolerance (4 digits):**
**E-96 系列标准阻值和料号系统使用代码（4位，0.1%,0.25%,0.5%,1%,2%公差）：**

| 阻值 Value | 代码 Code | 阻值 Value | 代码 Code | 阻值 Value | 代码 Code | 阻值 Value | 代码 Code | 阻值 Value | 代码 Code | 阻值 Value | 代码 Code | 阻值 Value | 代码 Code | 阻值 Value | 代码 Code |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10.0Ω | 10R0 | 17.8Ω | 17R8 | 31.6Ω | 31R6 | 56.2Ω | 56R2 | 100Ω | 1000 | 178Ω | 1780 | 316Ω | 3160 | 562Ω | 5620 |
| 10.2Ω | 10R2 | 18.2Ω | 18R2 | 32.4Ω | 32R4 | 57.6Ω | 57R6 | 102Ω | 1020 | 182Ω | 1820 | 324Ω | 3240 | 576Ω | 5760 |
| 10.5Ω | 10R5 | 18.7Ω | 18R7 | 33.2Ω | 33R2 | 59.0Ω | 59R0 | 105Ω | 1050 | 187Ω | 1870 | 332Ω | 3320 | 590Ω | 5900 |
| 10.7Ω | 10R7 | 19.1Ω | 19R1 | 34.0Ω | 34R0 | 60.4Ω | 60R4 | 107Ω | 1070 | 191Ω | 1910 | 340Ω | 3400 | 604Ω | 6040 |
| 11.0Ω | 11R0 | 19.6Ω | 19R6 | 34.8Ω | 34R8 | 61.9Ω | 61R9 | 110Ω | 1100 | 196Ω | 1960 | 348Ω | 3480 | 619Ω | 6190 |
| 11.3Ω | 11R3 | 20.0Ω | 20R0 | 35.7Ω | 35R7 | 63.4Ω | 63R4 | 113Ω | 1130 | 200Ω | 2000 | 357Ω | 3570 | 634Ω | 6340 |
| 11.5Ω | 11R5 | 20.5Ω | 20R5 | 36.5Ω | 36R5 | 64.9Ω | 64R9 | 115Ω | 1150 | 205Ω | 2050 | 365Ω | 3650 | 649Ω | 6490 |
| 11.8Ω | 11R8 | 21.0Ω | 21R0 | 37.4Ω | 37R4 | 66.5Ω | 66R5 | 118Ω | 1180 | 210Ω | 2100 | 374Ω | 3740 | 665Ω | 6650 |
| 12.1Ω | 12R1 | 21.5Ω | 21R5 | 38.3Ω | 38R3 | 68.1Ω | 68R1 | 121Ω | 1210 | 215Ω | 2150 | 383Ω | 3830 | 681Ω | 6810 |
| 12.4Ω | 12R4 | 22.1Ω | 22R1 | 39.2Ω | 39R2 | 69.8Ω | 69R8 | 124Ω | 1240 | 221Ω | 2210 | 392Ω | 3920 | 698Ω | 6980 |
| 12.7Ω | 12R7 | 22.6Ω | 22R6 | 40.2Ω | 40R2 | 71.5Ω | 71R5 | 127Ω | 1270 | 226Ω | 2260 | 402Ω | 4020 | 715Ω | 7150 |
| 13.0Ω | 13R0 | 23.2Ω | 23R2 | 41.2Ω | 41R2 | 73.2Ω | 73R2 | 130Ω | 1300 | 232Ω | 2320 | 412Ω | 4120 | 732Ω | 7320 |
| 13.3Ω | 13R3 | 23.7Ω | 23R7 | 42.2Ω | 42R2 | 75.0Ω | 75R0 | 133Ω | 1330 | 237Ω | 2370 | 422Ω | 4220 | 750Ω | 7500 |
| 13.7Ω | 13R7 | 24.3Ω | 24R3 | 43.2Ω | 43R2 | 76.8Ω | 76R8 | 137Ω | 1370 | 243Ω | 2430 | 432Ω | 4320 | 768Ω | 7680 |
| 14.0Ω | 14R0 | 24.9Ω | 24R9 | 44.2Ω | 44R2 | 78.7Ω | 78R7 | 140Ω | 1400 | 249Ω | 2490 | 442Ω | 4420 | 787Ω | 7870 |
| 14.3Ω | 14R3 | 25.5Ω | 25R5 | 45.3Ω | 45R3 | 80.6Ω | 80R6 | 143Ω | 1430 | 255Ω | 2550 | 453Ω | 4530 | 806Ω | 8060 |
| 14.7Ω | 14R7 | 26.1Ω | 26R1 | 46.4Ω | 46R4 | 82.5Ω | 82R5 | 147Ω | 1470 | 261Ω | 2610 | 464Ω | 4640 | 825Ω | 8250 |
| 15.0Ω | 15R0 | 26.7Ω | 26R7 | 47.5Ω | 47R5 | 84.5Ω | 84R5 | 150Ω | 1500 | 267Ω | 2670 | 475Ω | 4750 | 845Ω | 8450 |
| 15.4Ω | 15R4 | 27.4Ω | 27R4 | 48.7Ω | 48R7 | 86.6Ω | 86R6 | 154Ω | 1540 | 274Ω | 2740 | 487Ω | 4870 | 866Ω | 8660 |
| 15.8Ω | 15R8 | 28.0Ω | 28R0 | 49.9Ω | 49R9 | 88.7Ω | 88R7 | 158Ω | 1580 | 280Ω | 2800 | 499Ω | 4990 | 887Ω | 8870 |
| 16.2Ω | 16R2 | 28.7Ω | 28R7 | 51.1Ω | 51R1 | 90.9Ω | 90R9 | 162Ω | 1620 | 287Ω | 2870 | 511Ω | 5110 | 909Ω | 9090 |
| 16.5Ω | 16R5 | 29.4Ω | 29R4 | 52.3Ω | 52R3 | 93.1Ω | 93R1 | 165Ω | 1650 | 294Ω | 2940 | 523Ω | 5230 | 931Ω | 9310 |
| 16.9Ω | 16R9 | 30.1Ω | 30R1 | 53.6Ω | 53R6 | 95.3Ω | 95R3 | 169Ω | 1690 | 301Ω | 3010 | 536Ω | 5360 | 953Ω | 9530 |
| 17.4Ω | 17R4 | 30.9Ω | 30R9 | 54.9Ω | 54R9 | 97.6Ω | 97R6 | 174Ω | 1740 | 309Ω | 3090 | 549Ω | 5490 | 976Ω | 9760 |

FORMOSA 台灣 电话：0755-33173210

## 标准阻值 Standard Nominal Resistance Values

| 阻值 Value | 代码 Code | 阻值 Value | 代码 Code | 阻值 Value | 代码 Code | 阻值 Value | 代码 Code | 阻值 Value | 代码 Code | 阻值 Value | 代码 Code | 阻值 Value | 代码 Code | 阻值 Value | 代码 Code |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.00K | 1001 | 2.37K | 2371 | 5.62K | 5621 | 13.3K | 1332 | 31.6K | 3162 | 75.0K | 7502 | 178K | 1783 | 422K | 4223 |
| 1.02K | 1021 | 2.43K | 2431 | 5.76K | 5761 | 13.7K | 1372 | 32.4K | 3242 | 76.8K | 7682 | 182K | 1823 | 432K | 4323 |
| 1.05K | 1051 | 2.49K | 2491 | 5.90K | 5901 | 14.0K | 1402 | 33.2K | 3322 | 78.7K | 7872 | 187K | 1873 | 442K | 4423 |
| 1.07K | 1071 | 2.55K | 2551 | 6.04K | 6041 | 14.3K | 1432 | 34.0K | 3402 | 80.6K | 8062 | 191K | 1913 | 453K | 4533 |
| 1.10K | 1101 | 2.61K | 2611 | 6.19K | 6191 | 14.7K | 1472 | 34.8K | 3482 | 82.5K | 8252 | 196K | 1963 | 464K | 4643 |
| 1.13K | 1131 | 2.67K | 2671 | 6.34K | 6341 | 15.0K | 1502 | 35.7K | 3572 | 84.5K | 8452 | 200K | 2003 | 475K | 4753 |
| 1.15K | 1151 | 2.74K | 2741 | 6.49K | 6491 | 15.4K | 1542 | 36.5K | 3652 | 86.6K | 8662 | 205K | 2053 | 487K | 4873 |
| 1.18K | 1181 | 2.80K | 2801 | 6.65K | 6651 | 15.8K | 1582 | 37.4K | 3742 | 88.7K | 8872 | 210K | 2103 | 499K | 4993 |
| 1.21K | 1211 | 2.87K | 2871 | 6.81K | 6811 | 16.2K | 1622 | 38.3K | 3832 | 90.9K | 9092 | 215K | 2153 | 511K | 5113 |
| 1.24K | 1241 | 2.94K | 2941 | 6.98K | 6981 | 16.5K | 1652 | 39.2K | 3922 | 93.1K | 9312 | 221K | 2213 | 523K | 5233 |
| 1.27K | 1271 | 3.01K | 3011 | 7.15K | 7151 | 16.9K | 1692 | 40.2K | 4022 | 95.3K | 9532 | 226K | 2263 | 536K | 5363 |
| 1.30K | 1301 | 3.09K | 3091 | 7.32K | 7321 | 17.4K | 1742 | 41.2K | 4122 | 97.6K | 9762 | 232K | 2323 | 549K | 5493 |
| 1.33K | 1331 | 3.16K | 3161 | 7.50K | 7501 | 17.8K | 1782 | 42.2K | 4222 | 100K | 1003 | 237K | 2373 | 562K | 5623 |
| 1.37K | 1371 | 3.24K | 3241 | 7.68K | 7681 | 18.2K | 1822 | 43.2K | 4322 | 102K | 1023 | 243K | 2433 | 576K | 5763 |
| 1.40K | 1401 | 3.32K | 3321 | 7.87K | 7871 | 18.7K | 1872 | 44.2K | 4422 | 105K | 1053 | 249K | 2493 | 590K | 5903 |
| 1.43K | 1431 | 3.40K | 3401 | 8.06K | 8061 | 19.1K | 1912 | 45.3K | 4532 | 107K | 1073 | 255K | 2553 | 604K | 6043 |
| 1.47K | 1471 | 3.48K | 3481 | 8.25K | 8251 | 19.6K | 1962 | 46.4K | 4642 | 110K | 1103 | 261K | 2613 | 619K | 6193 |
| 1.50K | 1501 | 3.57K | 3571 | 8.45K | 8451 | 20.0K | 2002 | 47.5K | 4752 | 113K | 1133 | 267K | 2673 | 634K | 6343 |
| 1.54K | 1541 | 3.65K | 3651 | 8.66K | 8661 | 20.5K | 2050 | 48.7K | 4872 | 115K | 1153 | 274K | 2743 | 649K | 6493 |
| 1.58K | 1581 | 3.74K | 3741 | 8.87K | 8871 | 21.0K | 2102 | 49.9K | 4992 | 118K | 1183 | 280K | 2803 | 665K | 6653 |
| 1.62K | 1621 | 3.83K | 3831 | 9.09K | 9091 | 21.5K | 2152 | 51.1K | 5112 | 121K | 1213 | 287K | 2873 | 681K | 6813 |
| 1.65K | 1651 | 3.92K | 3921 | 9.31K | 9311 | 22.1K | 2212 | 52.3K | 5232 | 124K | 1243 | 294K | 2943 | 698K | 6983 |
| 1.69K | 1691 | 4.02K | 4021 | 9.53K | 9531 | 22.6K | 2262 | 53.6K | 5362 | 127K | 1273 | 301K | 3013 | 715K | 7153 |
| 1.74K | 1741 | 4.12K | 4121 | 9.76K | 9761 | 23.2K | 2322 | 54.9K | 5492 | 130K | 1303 | 309K | 3093 | 732K | 7323 |
| 1.78K | 1781 | 4.22K | 4221 | 10.0K | 1002 | 23.7K | 2372 | 56.9K | 5692 | 133K | 1333 | 316K | 3163 | 750K | 7503 |
| 1.82K | 1821 | 4.32K | 4321 | 10.2K | 1022 | 24.3K | 2432 | 57.6K | 5762 | 137K | 1373 | 324K | 3243 | 768K | 7683 |
| 1.87K | 1871 | 4.42K | 4421 | 10.5K | 1052 | 24.9K | 2492 | 59.0K | 5902 | 140K | 1403 | 332K | 3323 | 787K | 7873 |
| 1.91K | 1911 | 4.53K | 4531 | 10.7K | 1072 | 25.5K | 2552 | 60.4K | 6042 | 143K | 1433 | 340K | 3403 | 806K | 8063 |
| 1.96K | 1961 | 4.64K | 4641 | 11.0K | 1102 | 26.1K | 2612 | 61.9K | 6192 | 147K | 1473 | 348K | 3483 | 825K | 8253 |
| 2.00K | 2001 | 4.75K | 4751 | 11.3K | 1132 | 26.7K | 2672 | 63.4K | 6342 | 150K | 1503 | 357K | 3573 | 845K | 8453 |
| 2.05K | 2051 | 4.87K | 4871 | 11.5K | 1152 | 27.4K | 2742 | 64.9K | 6492 | 154K | 1543 | 365K | 3653 | 866K | 8663 |
| 2.10K | 2101 | 4.99K | 4991 | 11.8K | 1182 | 28.0K | 2802 | 66.5K | 6652 | 158K | 1583 | 374K | 3743 | 887K | 8873 |
| 2.15K | 2151 | 5.11K | 5111 | 12.1K | 1212 | 28.7K | 2872 | 68.1K | 6812 | 162K | 1623 | 383K | 3833 | 909K | 9093 |
| 2.21K | 2211 | 5.23K | 5231 | 12.4K | 1242 | 29.4K | 2942 | 69.8K | 6982 | 165K | 1653 | 392K | 3923 | 931K | 9313 |
| 2.26K | 2261 | 5.36K | 5361 | 12.7K | 1272 | 30.1K | 3012 | 71.5K | 7152 | 169K | 1693 | 402K | 4023 | 953K | 9533 |
| 2.32K | 2321 | 5.49K | 5491 | 13.0K | 1302 | 30.9K | 3092 | 73.2K | 7322 | 174K | 1743 | 412K | 4123 | 976K | 9763 |
| 以上所有阻值都是标准阻值，其他阻值可以特别提供，但有相应MOQ之要求。All values shown above are standard resistance values, other values could also be provided on a case to case basis (MOQ requested) | | | | | | | | | | | | | | 1M | 1004 |

DGPHASE 电话：0755-23173910

## 特性 Features

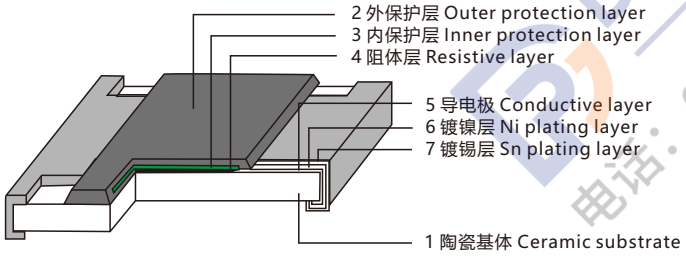
适合贴片机组装 Suitable for SMT
符合RoHS和无卤标准 Meet RoHS & HF Requirement
低阻值，适合大电流通过 Low Resistance & Suitable for Large Current Application
超低阻值 Ultra-low Value

## 应用 Application

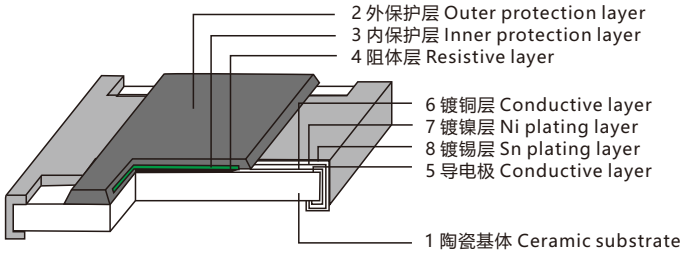
电源供应器 Power supply
DC-DC转换器，电池组，充电器，适配器 DC-DC Converter, Battery Pack, Charger, Adaptor

## 构造 Construction

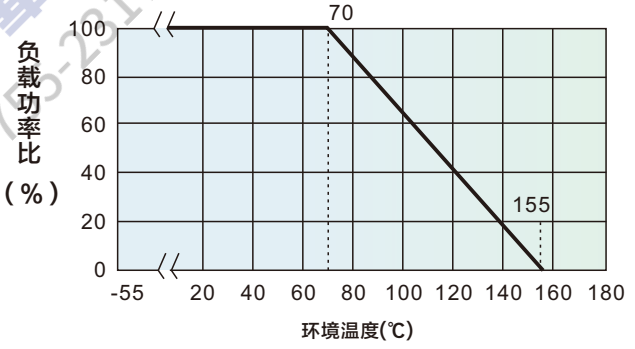
**阻值300mΩ（不含）以上结构**




**阻值300mΩ（含）以下结构**




## 功率衰减曲线 Power Derating Curve




## 订货方式（例如1206 5% 1/4W 300mΩ）
## Ordering Procedure（Example 1206 5% 1/4W 300mΩ）
## 料号（Part Number）：CR1206J4R300G

| CR | 1206 | J | 4 | R300 | G |
|---|---|---|---|---|---|
| **类型（Type）**<br>CR：厚膜贴片电阻（Thick Film Chip Resistors） | **尺寸（Size）**<br>0402<br>0603<br>0805<br>1206<br>1210<br>2010<br>2512 | **公差 Tolerance**<br>F=±1%<br>J=±5% | **额定功率 Rated Power**<br>1=1W<br>2=3/4W<br>3=1/2W<br>4=1/4W<br>8=1/8W<br>A=1/10W<br>F=1/16W | **阻值 Resistance Value**<br><100mΩ(不含)<br>R010=10mΩ<br>R082=82mΩ<br>≧100mΩ(含)<br>R300=300mΩ<br>R470=470mΩ | **包装代码 Packing Code**<br>G= Reel (卷装)<br>S=10 inch reel 卷装<br>U=13 inch reel 卷装<br>V= bulk （散料） |

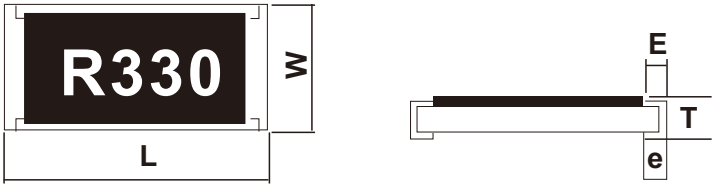
DGPHNST 肇庆 电话：0758-2317910

## 特性 Characteristics

| 类型 Type | CR0402 | CR0603 | CR0805 | CR1206 | CR1210 | CR2010 | CR2512 |
|---|---|---|---|---|---|---|---|
| 额定功率<br>70℃Rated Power at 70℃ | 1/16W | 1/10W | 1/8W | 1/4W | 1/2W | 3/4W | 1W |
| 最大工作电流<br>Max Working Current | 1.58A | 3.16A | 3.54A | 5.00A | 7.07A | 8.66A | 10.00A |
| 最大过负荷电流<br>Max Overload Current | 3.95A | 7.91A | 8.84A | 12.50A | 17.67A | 21.65A | 25.00A |
| 绝缘耐压<br>Dielectric WithStanding Voltage | 150V | 220V | 430V | 570V | 710V | 710V | 710V |
| 操作温度范围<br>Operating Temperature | -55～+155℃ | -55～+155℃ | -55～+155℃ | -55～+155℃ | -55～+155℃ | -55～+155℃ | -55～+155℃ |
| 1%阻值范围<br>Resistance Range of 1% | 0.025Ω-1Ω | 0.02Ω-1Ω | 0.02Ω-1Ω | 0.02Ω-1Ω | 0.02Ω-1Ω | 0.02Ω-1Ω | 0.02Ω-1Ω |
| 5%阻值范围<br>Resistance Range of 5% | 0.025Ω-1Ω | 0.01Ω-1Ω | 0.01Ω-1Ω | 0.01Ω-1Ω | 0.01Ω-1Ω | 0.01Ω-1Ω | 0.01Ω-1Ω |

DGPHNST 華年 电话：0755-23173910

## 外形尺寸 Dimension




| 类型 Type | | CR0402 | CR0603 | CR0805 | CR1206 | CR1210 | CR2010 | CR2512 |
|---|---|---|---|---|---|---|---|---|
| 尺寸 Dimension | L(mm) | 1.00±0.05 | 1.60±0.10 | 2.00±0.15 | 3.10±0.15 | 3.10±0.15 | 5.00±0.20 | 6.25±0.20 |
| | W(mm) | 0.50±0.05 | 0.80±0.10 | 1.25±0.15 | 1.60±0.15 | 2.50±0.15 | 2.50±0.20 | 3.10±0.20 |
| | T(mm) | 0.30±0.05 | 0.45±0.10 | 0.50±0.10 | 0.55±0.10 | 0.55±0.15 | 0.55±0.15 | 0.55±0.15 |
| | E(mm) | 0.15±0.10 | 0.25±0.20 | 0.35±0.20 | 0.45±0.25 | 0.35±0.25 | 0.65±0.25 | 0.85±0.25 |
| | e(mm) | 0.20±0.10 | 0.30±0.20 | 0.40±0.20 | 0.40±0.25 | 0.60±0.25 | 0.50±0.25 | 0.95±0.25 |

## 性能 Performance Specifications

| 内容 Item | 测试方法 Test Methods | 规格 Specification Limits |
|---|---|---|
| 温度系数<br>Temperature Coefficient | JIS C5201 4.8 | 0.01Ω-0.03Ω（含）：±1500PPM/℃<br>0.03-0.1Ω（含）：±1000PPM/℃<br>0.1Ω-0.5Ω（含）：±800PPM/℃<br>＞0.5Ω：±600PPM/℃ |
| 焊锡性<br>Solderability | JIS C5201 4.17 | 最少95%面积上锡 Min 95% coverage |
| 绝缘电阻<br>Insulation Resistance | JIS C5201 4.6 | ＞10GΩ |
| 绝缘耐压<br>Dielectric Withstanding Voltage | JIS C5201 4.7 | 无击穿、飞弧及可见机械性损伤<br>No evidence of flashover,mechanical damage arcing or insulation breakdown |
| 短时间过负荷<br>Short-Time Overload | JIS C5201 4.13 | ±(2.0%+0.001Ω)Max(最大) |
| 端子弯曲<br>Terminal Bending | JIS C5201 4.33 | ±(2.0%+0.001Ω)Max(最大) |
| 抗焊锡热<br>Resist to Soldering Heat | JIS C5201 4.18 | ±(1.0%+0.001Ω)Max(最大) |
| 负荷寿命<br>Load Life | JIS C5201 4.25.1 | ±(3.0%+0.001Ω)Max(最大) |
| 耐湿特性<br>Humidity | JIS C5201 4.24 | ±(2.0%+0.001Ω)Max(最大) |
| 温度循环<br>Temperature Cycling | JIS C5201 4.19 | ±(2.0%+0.001Ω)Max(最大) |
| 温湿循环<br>Moisture Resistance | MIL-STD-202<br>METHOD106 | ±(2.0%+0.001Ω)Max(最大) |

DGPHNST 霍王 电话：0755-29173910

**字码表示规则(10mΩ ~ 910mΩ):**

| R-value | 0805以上 Code | 0603 Code | R-value | 0805以上 Code | 0603 Code | R-value | 0805以上 Code | 0603 Code |
|---|---|---|---|---|---|---|---|---|
| 10mΩ | R010 | 010 | 100mΩ | R100 | R10 | 360mΩ | R360 | R36 |
| 15mΩ | R015 | 015 | 110mΩ | R110 | R11 | 390mΩ | R390 | R39 |
| 20mΩ | R020 | 020 | 120mΩ | R120 | R12 | 400mΩ | R400 | R40 |
| 25mΩ | R025 | 025 | 130mΩ | R130 | R13 | 430mΩ | R430 | R43 |
| 30mΩ | R030 | 030 | 150mΩ | R150 | R15 | 470mΩ | R470 | R47 |
| 40mΩ | R040 | 040 | 160mΩ | R160 | R16 | 500mΩ | R500 | R50 |
| 50mΩ | R050 | 050 | 180mΩ | R180 | R18 | 510mΩ | R510 | R51 |
| 56mΩ | R056 | 056 | 200mΩ | R200 | R20 | 560mΩ | R560 | R56 |
| 62mΩ | R062 | 062 | 220mΩ | R220 | R22 | 620mΩ | R620 | R62 |
| 68mΩ | R068 | 068 | 240mΩ | R240 | R24 | 680mΩ | R680 | R68 |
| 75mΩ | R075 | 075 | 270mΩ | R270 | R27 | 750mΩ | R750 | R75 |
| 82mΩ | R082 | 082 | 300mΩ | R300 | R30 | 820mΩ | R820 | R82 |
| 91mΩ | R091 | 091 | 330mΩ | R330 | R33 | 910mΩ | R910 | R91 |

**注:**

0402及以下规格：无字码表示

0603规格：±1%(F) 、 ± 5%(J)均采用"三码"表示方式

如: 阻值100mΩ = 0.10Ω = R100 = R10表示

阻值10mΩ = 0.010Ω = R010 = 010表示

0805及以上规格：±1%(F) 、 ± 5%(J)均采用"四码"表示方式

如: 阻值100mΩ = 0.10Ω = R100 = R100表示

阻值10mΩ = 0.010Ω = R010 = R010表示

DGPHYST 鑫丰一 电话：0755-23173910

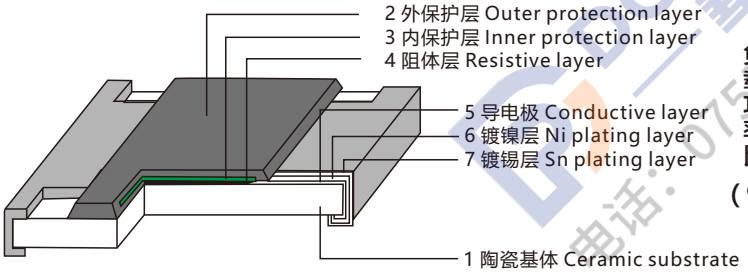
## 特性 Features

适合贴片机组装 Suitable for SMT
符合RoHS和无卤标准 Meet RoHS & HF Requirement
电极强化，更符合柔性线路板应用 Strengthened terminals & Suitable for Special Flexible PCB

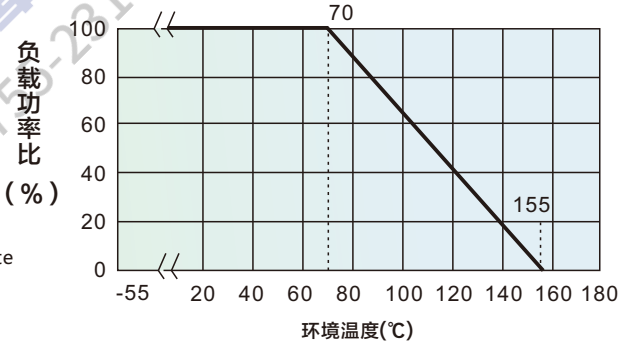
## 应用 Application

软性电路板 Soft Circuit board
软灯条电路 Soft lamp circuit

## 构造 Construction




## 功率衰减曲线 Power Derating Curve




GPHNST 華正 电话：0755-23173510

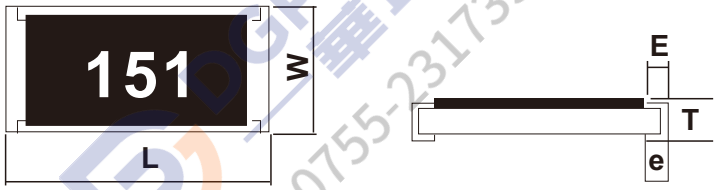
**订货方式（例如:1206 5% 1/4W 150R)**
**Ordering Procedure（Example: 1206 5% 1/4W 150R)**
**料号（Part Number）：CR1206J40151G**

| CR | 1206 | J | 4 | 0151 | G |
|---|---|---|---|---|---|
| 类型（Type）<br>CR：厚膜贴片电阻（Thick Film Chip Resistors) | 尺寸（Size）<br>0805<br>1206 | 公差 Tolerance<br>F=±1%<br>G=±2%<br>J=±5% | 额定功率 Rated Power<br>4=1/4W<br>8=1/8W | 阻值 Resistance Value<br>±5%,±2%<br>0151=150Ω<br>±1%<br>1002=10KΩ | 包装代码 Packing Code<br>G=Reel(卷装)<br>V=Bulk（散料）<br>S=Double Standard Quantity（两倍卷盘标准包装量） |

## 特性 Characteristics

| 类型 Type | 额定功率 Rated Power at 70℃ | 最大工作电压 Max Working Voltage | 最大过负荷电压 Max Overload Voltage | 绝缘耐压 Dielectric WithStanding Voltage | 操作温度范围 Operating Temperature | 1%阻值范围 Resistance Range of 1% | 2%阻值范围 Resistance Range of 2% | 5%阻值范围 Resistance Range of 5% |
|---|---|---|---|---|---|---|---|---|
| CR0805 | 1/8W | 150V | 300V | 430V | -55～+155℃ | 10Ω~10K | 10Ω~10K | 10Ω~10K |
| CR1206 | 1/4W | 200V | 400V | 570V | -55～+155℃ | 10Ω~10K | 10Ω~10K | 10Ω~10K |

## 外形尺寸 Dimension




| 类型 Type | L(mm) | W(mm) | T(mm) | E(mm) | e(mm) |
|---|---|---|---|---|---|
| CR0805 | 2.00±0.15 | 1.25±0.15 | 0.50±0.10 | 0.35±0.20 | 0.40±0.20 |
| CR1206 | 3.10±0.15 | 1.60±0.15 | 0.55±0.10 | 0.45±0.25 | 0.40±0.25 |

## 性能 Performance Specifications

| 内容 Item | 测试方法 Test Methods | 规格 Specification Limits |
|---|---|---|
| 温度系数 Temperature Coefficient | JIS C5201 4.8 | 10Ω < R≤10KΩ：±100 PPM/℃ |
| 焊锡性 Solderability | JIS C5201 4.17 | 最少95%面积上锡 Min 95% coverage |
| 绝缘电阻 Insulation Resistance | JIS C5201 4.6 | > 10GΩ |
| 绝缘耐压 Dielectric Withstanding Voltage | JIS C5201 4.7 | 无击穿、飞弧及可见机械性损伤 No evidence of flashover,mechanical damage arcing or insulation breakdown |
| 短时间过负荷 Short-Time Overload | JIS C5201 4.13 | ±(1.0%+0.05Ω)Max(最大) |
| 端子弯曲 Terminal Bending | JIS C5201 4.33 | ±(1.0%+0.05Ω)Max(最大) |
| 抗焊锡热 Resist to Soldering Heat | JIS C5201 4.18 | ±(1.0%+0.05Ω)Max(最大) |
| 负荷寿命 Load Life | JIS C5201 4.25.1 | ±(2.0%+0.05Ω)Max(最大) |
| 耐湿特性 Humidity | JIS C5201 4.24 | ±(2.0%+0.05Ω)Max(最大) |
| 温度循环 Temperature Cycling | JIS C5201 4.19 | ±(2.0%+0.05Ω)Max(最大) |
| 温湿循环 Moisture Resistance | MIL-STD-202 METHOD106 | ±(2.0%+0.05Ω)Max(最大) |

DGPHNST 广华年 电话：0755-23173910

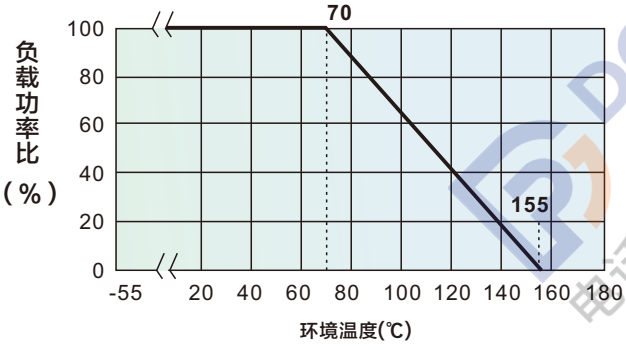
## 特性 Features

适合贴片机组装 Suitable for SMT
多电阻排列，节约空间 More resistors arrayed in one＆Space Saving
符合RoHS和无卤标准 Meet RoHS & HF Requirement

## 应用 Application

应用于CD、DVD、硬盘、内存、主板等
Master board,CD&DVD Rom,Hard Disk,RAM

## 功率衰减曲线 Power Derating Curve




DGPHNST 華年
电话：0755-23173910

## 订货方式（例如CA034A 5% 1/10W 1KΩ)
## Ordering Procedure（Example CA034A 5% 1/10W 1KΩ)
## 料号（Part Number）：CA034AJA0102G

| CA | 034A | J | A | 0102 | G |
|---|---|---|---|---|---|
| 类型（Type）<br>CA:厚膜贴片排阻<br>(Thick Film Chip Array Resitors) | 尺寸（Size）<br>024A=8P4R(0402)<br>034A=8P4R(0603) | 公差<br>Tolerance<br>F=±1%<br>G=±2%<br>J=±5% | 额定功率<br>Rated Power<br>A=1/10W<br>F=1/16W | 阻值<br>Resistance Value<br>±1%<br>49R9=49.9Ω<br>1002=10KΩ<br>±2%,±5%,<br>06R8=6.8Ω<br>0564=560KΩ | 包装代码<br>Packing Code<br>G=Reel(卷装)<br>V=Bulk（散料）<br>S=Double Standard Quantity（两倍卷盘标准包装量） |

## 标准包装数量 Standard Packing Quantity

CA024A: 10,000Pcs Per Reel(每卷10，000Pcs)
CA034A: 5,000Pcs Per Reel(每卷5，000Pcs)

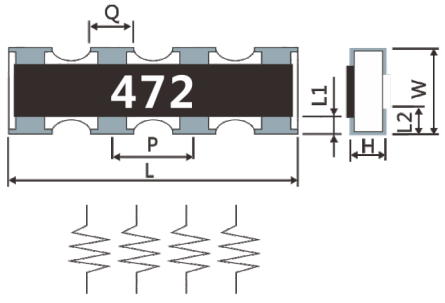
## 特性 Characteristics

| 类型 Type | CA024A | CA034A |
|---|---|---|
| 额定功率<br>70℃Rated Power at 70℃ | 1/16W | 1/10W |
| 最大工作电压<br>Max Working Voltage | 50V | 50V |
| 最大过负荷电压<br>Max Overload Voltage | 100V | 100V |
| 绝缘耐压<br>Dielectric WithStanding Voltage | 220V | 430V |
| 操作温度范围<br>Operating Temperature | -55～+155℃ | -55～+155℃ |
| 零欧姆电阻阻值<br>Resistance Value of Jumper | ＜50mΩ | ＜50mΩ |
| 零欧姆额定电流<br>Rated Current of Jumper | 1A | 1A |
| 1% 2% 5%阻值范围<br>Resistance Range of 1% 2% 5% | 1Ω-1MΩ | 1Ω-1MΩ |

DGPHNST 肇年 电话：0755-23173910

## 外形尺寸 Dimension

CA024A/CA034A




| 类型 Type | | CA024A | CA034A |
|---|---|---|---|
| 尺寸 Dimension | L(mm) | 2.00±0.10 | 3.20±0.20 |
| | W(mm) | 1.00±0.10 | 1.50±0.20 |
| | H(mm) | 0.40±0.05 | 0.55±0.05 |
| | L1(mm) | 0.18±0.10 | 0.30±0.15 |
| | Q(mm) | 0.33±0.10 | 0.50±0.15 |
| | P(mm) | 0.50±0.10 | 0.80±0.15 |
| | L2(mm) | 0.26±0.10 | 0.30±0.20 |

## 性能 Performance Specifications

| 内容 Item | 测试方法 Test Methods | 规格 Specification Limits |
|---|---|---|
| 温度系数<br>Temperature Coefficient | JIS C5201 4.8 | ±200 PPM/℃ |
| 焊锡性<br>Solderability | JIS C5201 4.17 | 最少95%面积上锡 Min 95% coverage |
| 绝缘电阻<br>Insulation Resistance | JIS C5201 4.6 | >10GΩ |
| 绝缘耐压<br>Dielectric Withstanding Voltage | JIS C5201 4.7 | 无击穿、飞弧及可见机械性损伤<br>No evidence of flashover,mechanical damage arcing or insulation breakdown |
| 短时间过负荷<br>Short-Time Overload | JIS C5201 4.13 | ±(1.0%+0.05Ω)Max(最大) |
| 端子弯曲<br>Terminal Bending | JIS C5201 4.33 | ±(1.0%+0.05Ω)Max(最大) |
| 抗焊锡热<br>Resist to Soldering Heat | JIS C5201 4.18 | ±(1.0%+0.05Ω)Max(最大) |
| 负荷寿命<br>Load Life | JIS C5201 4.25.1 | ±(2.0%+0.05Ω)Max(最大) |
| 耐湿特性<br>Humidity | JIS C5201 4.24 | ±(2.0%+0.05Ω)Max(最大) |
| 温度循环<br>Temperature Cycling | JIS C5201 4.19 | ±(2.0%+0.05Ω)Max(最大) |
| 温湿循环<br>Moisture Resistance | MIL-STD-202<br>METHOD106 | ±(2.0%+0.05Ω)Max(最大) |

DGPHNST 臻芯 电话：0755-29173910

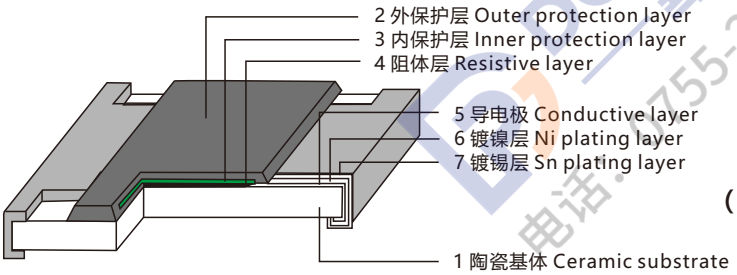
## 特性 Features

适合贴片机组装 Suitable for SMT
符合RoHS和无卤标准 Meet RoHS & HF Requirement
高功率 High Power

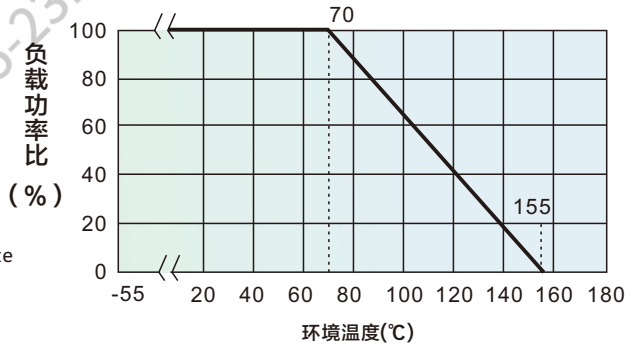
## 应用 Application

开关电源 Switching power supply
电压调节器 Voltage regulator
电源转换器 Power converter
充电器 Charger

## 构造 Construction




## 功率衰减曲线 Power Derating Curve




## 订货方式（例如0805 5% 1/4W 100Ω）
## Ordering Procedure（Example 0805 5% 1/4W 100Ω）
## 料号（Part Number）：CH0805J40101G

| CH | 0805 | J | 4 | 0101 | G |
|---|---|---|---|---|---|
| 类型（Type）<br>CH:高功率厚膜贴片电阻（High Power Thick Chip Resistors） | 尺寸（Size）<br>0402<br>0603<br>0805<br>1206<br>1210<br>2010<br>2512 | 公差<br>Tolerance<br>D=±0.5%<br>F=±1%<br>G=±2%<br>J=±5% | 额定功率<br>Rated Power<br>1=1W<br>2=3/4W<br>3=1/2W<br>4=1/4W<br>8=1/8W<br>A=1/10W<br>B=2W | 阻值<br>Resistance Value<br>±1%<br>49R9=49.9Ω<br>1002=10KΩ<br>±2%,±5%,<br>06R8=6.8Ω<br>0564=560KΩ | 包装代码<br>Packing Code<br>G=Reel(卷装)<br>V=Bulk（散料）<br>S=Double Standard Quantity（两倍卷盘标准包装量） |

## 标准包装数量 Standard Packing Quantity

0402：10,000Pcs Per Reel（每卷10，000Pcs）
0603/0805/1206：5,000Pcs Per Reel（每卷5，000Pcs）
2010/2512：4,000Pcs Per Reel（每卷4，000Pcs）

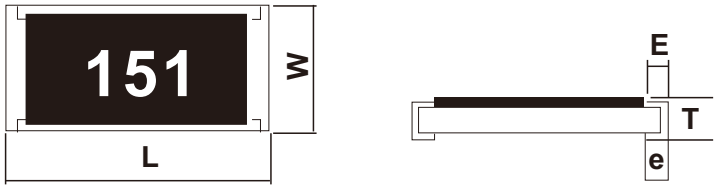
## 特性 Characteristics

| 类型 Type | CH0402 | CH0603 | CH0805 | CH1206 | CH1210 | CH2010 | CH2512 |
|---|---|---|---|---|---|---|---|
| 额定功率 70℃Rated Power at 70℃ | 1/10W | 1/8W | 1/4W | 1/2W | 3/4W | 1W | 2W |
| 最大工作电压 Max Working Voltage | 50V | 75V | 150V | 200V | 200V | 200V | 200V |
| 最大过负荷电压 Max Overload Voltage | 100V | 150V | 300V | 400V | 500V | 500V | 500V |
| 绝缘耐压 WithStanding Voltage Dielectric | 150V | 220V | 430V | 570V | 710V | 710V | 710V |
| 操作温度范围 Operating Temperature | -55～+155℃ | -55～+155℃ | -55～+155℃ | -55～+155℃ | -55～+155℃ | -55～+155℃ | -55～+155℃ |
| 零欧姆电阻阻值 Resistance Value of Jumper | < 50mΩ | < 50mΩ | < 50mΩ | < 50mΩ | < 50mΩ | < 50mΩ | < 50mΩ |
| 零欧姆电阻最大电流 Max Current of Jumper | 3.53A | 3.95A | 5.59A | 10.00A | 12.00A | 12.00A | 16.00A |
| 0.5%阻值范围 Resistance Range of 0.5% | 10Ω-1MΩ | 10Ω-1MΩ | 1Ω-1MΩ | 1Ω-1MΩ | 1Ω-1MΩ | 1Ω-1MΩ | 1Ω-1MΩ |
| 1%阻值范围 Resistance Range of 1% | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ |
| 2%阻值范围 Resistance Range of 2% | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ |
| 5%阻值范围 Resistance Range of 5% | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ |

DGPHNST 華年 电话：0755-23173910

## 外形尺寸 Dimension

### 形状 Figures



| 类型 Type | | CH0402 | CH0603 | CH0805 | CH1206 | CH1210 | CH2010 | CH2512 |
|---|---|---|---|---|---|---|---|---|
| 尺寸 Dimension | L(mm) | 1.00±0.05 | 1.60±0.10 | 2.00±0.15 | 3.10±0.15 | 3.10±0.15 | 5.00±0.20 | 6.25±0.20 |
| | W(mm) | 0.50±0.05 | 0.80±0.10 | 1.25±0.15 | 1.60±0.15 | 2.50±0.15 | 2.50±0.20 | 3.10±0.20 |
| | T(mm) | 0.30±0.05 | 0.45±0.10 | 0.50±0.10 | 0.55±0.10 | 0.55±0.15 | 0.55±0.15 | 0.55±0.15 |
| | E(mm) | 0.15±0.10 | 0.25±0.20 | 0.35±0.20 | 0.45±0.25 | 0.35±0.25 | 0.65±0.25 | 0.85±0.25 |
| | e(mm) | 0.20±0.10 | 0.30±0.20 | 0.40±0.20 | 0.40±0.25 | 0.60±0.25 | 0.50±0.25 | 0.95±0.25 |

## 性能 Performance Specifications

| 内容 Item | 测试方法 Test Methods | 规格 Specification Limits |
|---|---|---|
| 温度系数<br>Temperature Coefficient | JIS C5201 4.8 | 1Ω≤R≤10Ω：±200PPM/℃<br>10Ω＜R≤10MΩ：±100 PPM/℃<br>10MΩ＜R≤100MΩ：±200 PPM/℃ |
| 焊锡性<br>Solderability | JIS C5201 4.17 | 最少95%面积上锡 Min 95% coverage |
| 绝缘电阻<br>Insulation Resistance | JIS C5201 4.6 | ＞10GΩ |
| 绝缘耐压<br>Dielectric Withstanding Voltage | JIS C5201 4.7 | 无击穿、飞弧及可见机械性损伤<br>No evidence of flashover,mechanical damage arcing or insulation breakdown |
| 短时间过负荷<br>Short-Time Overload | JIS C5201 4.13 | ±(1.0%+0.05Ω)Max(最大) |
| 端子弯曲<br>Terminal Bending | JIS C5201 4.33 | ±(1.0%+0.05Ω)Max(最大) |
| 抗焊锡热<br>Resist to Soldering Heat | JIS C5201 4.18 | ±(1.0%+0.05Ω)Max(最大) |
| 负荷寿命<br>Load Life | JIS C5201 4.25.1 | ±(2.0%+0.05Ω)Max(最大) |
| 耐湿特性<br>Humidity | JIS C5201 4.24 | ±(2.0%+0.05Ω)Max(最大) |
| 温度循环<br>Temperature Cycling | JIS C5201 4.19 | ±(2.0%+0.05Ω)Max(最大) |
| 温湿循环<br>Moisture Resistance | MIL-STD-202<br>METHOD106 | ±(2.0%+0.05Ω)Max(最大) |

DGPHNST 肇年 电话：0755-23173910

## 特性 Features

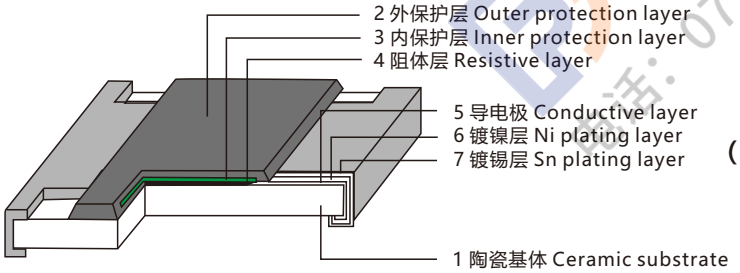
适合贴片机组装 Suitable for SMT
符合RoHS和无卤标准 Meet RoHS & HF Requirement
符合AEC-Q200标准 Comply with AEC-Q200 standard
此类型电阻在包装前100%通过自动光学检测 The resistors are 100% perfomed by automatic optical inspection prior to taping

## 应用 Application

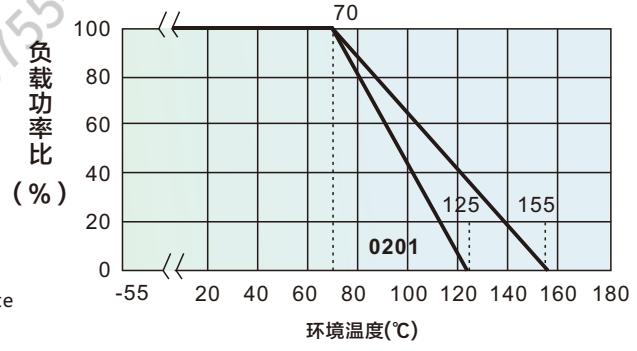
汽车电子 Automotive electronics
电信设备 Telecommunications equipment
电源电压控制 Voltage control in power supplies
测试和测量设备 Test & Measurment equipment

DGPHNST 華年 电话：0755-23173910

## 构造 Construction




## 功率衰减曲线 Power Derating Curve




## 订货方式（例如 0603 5% 1/10W 100Ω）
## Ordering Procedure（Example 0603 5% 1/10W 100Ω）
## 料号（Part Number）：AQ0603JA0101G

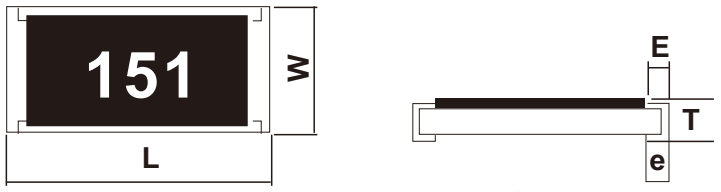
| AQ | 0603 | J | A | 0101 | G |
|---|---|---|---|---|---|
| 类型（Type）<br>AQ:汽车厚膜贴片电阻（Automotive Thick Film Chip Resistors） | 尺寸（Size）<br>0201<br>0402<br>0603<br>0805<br>1206<br>1210<br>2010<br>2512 | 公差<br>Tolerance<br>F=±1%<br>G=±2%<br>J=±5% | 额定功率<br>Rated Power<br>1=1W<br>2=3/4W<br>3=1/2W<br>4=1/4W<br>8=1/8W<br>A=1/10W<br>F=1/16W<br>H=1/20W | 阻值<br>Resistance Value<br>±1%;<br>49R9=49.9Ω<br>1002=10KΩ<br>±5%；±2%<br>06R8=6.8Ω<br>0564=560KΩ | 包装代码<br>Packing Code<br>G=Reel(卷装)<br>V=Bulk（散料）<br>S=Double Standard Quantity（两倍卷盘标准包装量） |

## 特性 Characteristics

| 类型 Type | AQ0201 | AQ0402 | AQ0603 | AQ0805 | AQ1206 | AQ1210 | AQ2010 | AQ2512 |
|---|---|---|---|---|---|---|---|---|
| 额定功率 70℃Rated Power at 70℃ | 1/20W | 1/16W | 1/10W | 1/8W | 1/4W | 1/2W | 3/4W | 1W |
| 最大工作电压 Max Working Voltage | 25V | 50V | 75V | 150V | 200V | 200V | 200V | 200V |
| 最大过负荷电压 Max Overload Voltage | 50V | 100V | 150V | 300V | 400V | 500V | 500V | 500V |
| 绝缘耐压 WithStanding Voltage Dielectric | 75V | 150V | 220V | 430V | 570V | 710V | 710V | 710V |
| 操作温度范围 Operating Temperature | -55～+125℃ | -55～+155℃ | -55～+155℃ | -55～+155℃ | -55～+155℃ | -55～+155℃ | -55～+155℃ | -55～+155℃ |
| 零欧姆电阻阻值 Resistance Value of Jumper | ＜50mΩ | ＜50mΩ | ＜50mΩ | ＜50mΩ | ＜50mΩ | ＜50mΩ | ＜50mΩ | ＜50mΩ |
| 零欧姆额定电流 Rated Current of Jumper | 0.5A | 1.0A | 1.0A | 2.0A | 2.0A | 2.0A | 2.0A | 2.0A |
| 零欧姆最大电流 Max Current of jumper | 1.0A | 2.0A | 2.0A | 5.0A | 10.0A | 10.0A | 10.0A | 10.0A |
| 1%阻值范围 Resistance Range of 1% | 1Ω-10MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ |
| 2%阻值范围 Resistance Range of 2% | 1Ω-10MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ |
| 5%阻值范围 Resistance Range of 5% | 1Ω-10MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ |

DGPHYST 鑫宇 电话：0755-23173910

## 外形尺寸 Dimension




| 类型 Type | | AQ0201 | AQ0402 | AQ0603 | AQ0805 | AQ1206 | AQ1210 | AQ2010 | AQ2512 |
|---|---|---|---|---|---|---|---|---|---|
| 尺寸 Dimension | L(mm) | 0.60±0.03 | 1.00±0.05 | 1.60±0.10 | 2.00±0.15 | 3.10±0.15 | 3.10±0.15 | 5.00±0.20 | 6.25±0.20 |
| | W(mm) | 0.30±0.03 | 0.50±0.05 | 0.80±0.10 | 1.25±0.15 | 1.60±0.15 | 2.50±0.15 | 2.50±0.20 | 3.10±0.20 |
| | T(mm) | 0.23±0.03 | 0.30±0.05 | 0.45±0.10 | 0.50±0.10 | 0.55±0.10 | 0.55±0.15 | 0.55±0.15 | 0.55±0.15 |
| | E(mm) | 0.10±0.05 | 0.15±0.10 | 0.25±0.20 | 0.35±0.20 | 0.45±0.25 | 0.35±0.25 | 0.65±0.25 | 0.85±0.25 |
| | e(mm) | 0.15±0.05 | 0.20±0.10 | 0.30±0.20 | 0.40±0.20 | 0.40±0.25 | 0.60±0.25 | 0.50±0.25 | 0.95±0.25 |

## 性能 Performance Specifications

| 内容 Item | 测试方法 Test Methods | 规格 Specification Limits |
|---|---|---|
| 温度系数<br>Temperature Coefficient | JIS C5201 4.8 | 0201规格:<br>1Ω≤R≤10Ω: -100～+300 PPM/℃<br>10Ω＜R≤10MΩ: ±200 PPM/℃<br>0402～2512规格:<br>1Ω≤R≤10Ω: ±200PPM/℃<br>10Ω＜R≤10MΩ: ±100 PPM/℃<br>10MΩ＜R≤100MΩ: ±200 PPM/℃ |
| 焊锡性<br>Solderability | J-STD-002 | 最少95%面积上锡 Min 95% coverage |
| 绝缘电阻<br>Insulation Resistance | JIS C5201 4.6 | ＞10GΩ |
| 绝缘耐压<br>Dielectric Withstanding Voltage | JIS C5201 4.7 | 无击穿、飞弧及可见机械性损伤<br>No evidence of flashover,mechanical damage arcing or insulation breakdown |
| 短时间过负荷<br>Short-Time Overload | JIS C5201 4.13 | ±(1.0%+0.05Ω)Max(最大) |
| 端子弯曲<br>Board Flex | AEC-Q200-005 | ±(1.0%+0.05Ω)Max(最大) |
| 抗焊锡热<br>Resistance to Soldering Heat | MIL-STD-202<br>METHOD 210 | ±(1.0%+0.05Ω)Max(最大) |
| 负荷寿命<br>Operational Life | MIL-STD-202<br>METHOD 108 | ±(2.0%+0.05Ω)Max(最大) |
| 耐湿特性<br>Biased Humidity | MIL-STD-202<br>METHOD 103 | ±(2.0%+0.05Ω)Max(最大) |
| 温度循环<br>Temperature Cycling | JESD22<br>METHOD JA-104 | ±(2.0%+0.05Ω)Max(最大) |
| 温湿循环<br>Moisture resistance | MIL-STD-202<br>METHOD 106 | ±(2.0% +0.05Ω) Max (最大) |
| 高温储存<br>High Temperature Exposure(Storage) | MIL-STD-202<br>METHOD 108 | ±(1.0% +0.05Ω) Max (最大) |
| ESD试验<br>ESD test | AEC-Q200-002 | ±(3.0% +0.05Ω) Max (最大) |
| 抗硫化试验<br>Sulfurstion Test | ASTM-B-809-95 | ±(1.0%+0.05Ω)Max(最大) |

DGRIST 电话: 0755-25

## 特性 Features

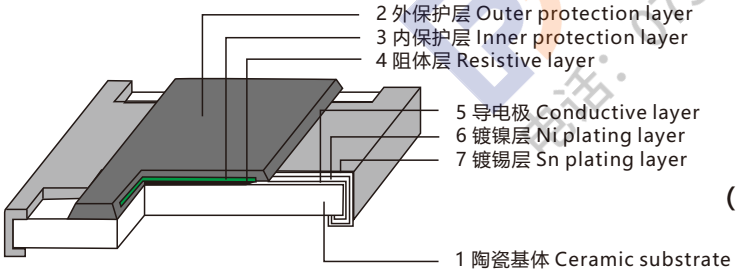
适合贴片机组装 Suitable for SMT
符合RoHS和无卤标准 Meet RoHS & HF Requirement
优越的抗硫化特性 Superior resistance against sulfur containing atmosphere
符合AEC-Q200标准 Comply with AEC-Q200 standard

## 应用 Application

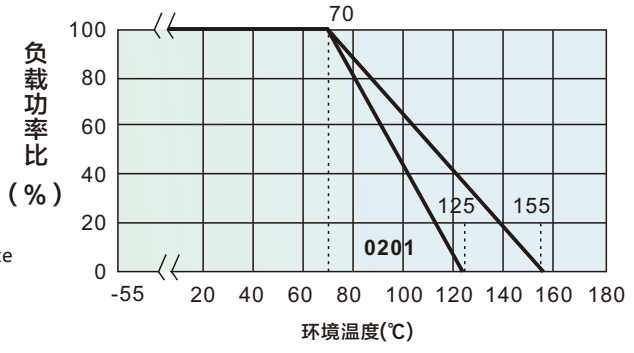
汽车电子 Automotive electronics
自动化设备控制器 Automatic Equipment Controller
医疗设备 Medical Equipment
户外电子应用 Outdoor Electronic Applications

DGPHNST 華平 电话：0755-23173910

## 构造 Construction




## 功率衰减曲线 Power Derating Curve




## 订货方式（例如 0603 5% 1/10W 100Ω）
## Ordering Procedure（Example 0603 5% 1/10W 100Ω）
## 料号（Part Number）：AS0603JA0101G

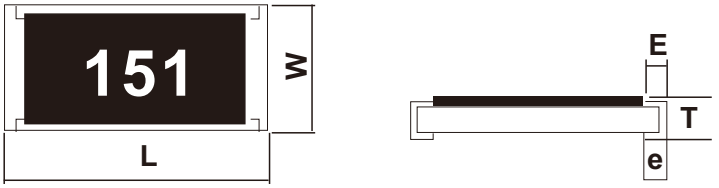
| AS | 0603 | J | A | 0101 | G |
|---|---|---|---|---|---|
| 类型（Type）<br>AS:抗硫化厚膜贴片电阻<br>(Anti-Sulfuration Thick Film Chip Resistors) | 尺寸（Size）<br>0201<br>0402<br>0603<br>0805<br>1206<br>1210<br>2010<br>2512 | 公差<br>Tolerance<br>F=±1%<br>G=±2%<br>J=±5% | 额定功率<br>Rated Power<br>1=1W<br>2=3/4W<br>3=1/2W<br>4=1/4W<br>8=1/8W<br>A=1/10W<br>F=1/16W<br>H=1/20W | 阻值<br>Resistance Value<br>1%:<br>49R9=49.9Ω<br>1002=10KΩ<br><br>±5%；±2%<br>06R8=6.8Ω<br>0564=560KΩ | 包装代码<br>Packing Code<br>G=Reel(卷装)<br>V=Bulk（散料）<br>S=Double Standard Quantity（两倍卷盘标准包装量） |

## 特性 Characteristics

| 类型 Type | AS0201 | AS0402 | AS0603 | AS0805 | AS1206 | AS1210 | AS2010 | AS2512 |
|---|---|---|---|---|---|---|---|---|
| 额定功率 70℃Rated Power at 70℃ | 1/20W | 1/16W | 1/10W | 1/8W | 1/4W | 1/2W | 3/4W | 1W |
| 最大工作电压 Max Working Voltage | 25V | 50V | 75V | 150V | 200V | 200V | 200V | 200V |
| 最大过负荷电压 Max Overload Voltage | 50V | 100V | 150V | 300V | 400V | 500V | 500V | 500V |
| 绝缘耐压 WithStanding Voltage Dielectric | 75V | 150V | 220V | 430V | 570V | 710V | 710V | 710V |
| 操作温度范围 Operating Temperature | -55～+125℃ | -55～+155℃ | -55～+155℃ | -55～+155℃ | -55～+155℃ | -55～+155℃ | -55～+155℃ | -55～+155℃ |
| 零欧姆电阻阻值 Resistance Value of Jumper | ＜50mΩ | ＜50mΩ | ＜50mΩ | ＜50mΩ | ＜50mΩ | ＜50mΩ | ＜50mΩ | ＜50mΩ |
| 零欧姆额定电流 Rated Current of Jumper | 0.5A | 1.0A | 1.0A | 2.0A | 2.0A | 2.0A | 2.0A | 2.0A |
| 零欧姆最大电流 Max Current of jumper | 1.0A | 2.0A | 2.0A | 5.0A | 10.0A | 10.0A | 10.0A | 10.0A |
| 1%阻值范围 Resistance Range of 1% | 1Ω-10MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ |
| 2%阻值范围 Resistance Range of 2% | 1Ω-10MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ |
| 5%阻值范围 Resistance Range of 5% | 1Ω-10MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ |

DGPHNST 肇丰 电话：0755-23173910

## 外形尺寸 Dimension




| 类型 Type | | AS0201 | AS0402 | AS0603 | AS0805 | AS1206 | AS1210 | AS2010 | AS2512 |
|---|---|---|---|---|---|---|---|---|---|
| 尺寸 Dimension | L(mm) | 0.60±0.03 | 1.00±0.05 | 1.60±0.10 | 2.00±0.15 | 3.10±0.15 | 3.10±0.15 | 5.00±0.20 | 6.25±0.20 |
| | W(mm) | 0.30±0.03 | 0.50±0.05 | 0.80±0.10 | 1.25±0.15 | 1.60±0.15 | 2.50±0.15 | 2.50±0.20 | 3.10±0.20 |
| | T(mm) | 0.23±0.03 | 0.30±0.05 | 0.45±0.10 | 0.50±0.10 | 0.55±0.10 | 0.55±0.15 | 0.55±0.15 | 0.55±0.15 |
| | E(mm) | 0.10±0.05 | 0.15±0.10 | 0.25±0.20 | 0.35±0.20 | 0.45±0.25 | 0.35±0.25 | 0.65±0.25 | 0.85±0.25 |
| | e(mm) | 0.15±0.05 | 0.20±0.10 | 0.30±0.20 | 0.40±0.20 | 0.40±0.25 | 0.60±0.25 | 0.50±0.25 | 0.95±0.25 |

## 性能 Performance Specifications

| 内容 Item | 测试方法 Test Methods | 规格 Specification Limits |
|---|---|---|
| 温度系数<br>Temperature Coefficient | JIS C5201 4.8 | 0201规格:<br>1Ω≤R≤10Ω：-100～+300 PPM/℃<br>10Ω＜R≤10MΩ：±200 PPM/℃<br>0402～2512规格:<br>1Ω≤R≤10Ω：±200PPM/℃<br>10Ω＜R≤10MΩ：±100 PPM/℃<br>10MΩ＜R≤22MΩ：±200 PPM/℃ |
| 焊锡性<br>Solderability | J-STD-002 | 最少95%面积上锡 Min 95% coverage |
| 绝缘电阻<br>Insulation Resistance | JIS C5201 4.6 | ＞10GΩ |
| 绝缘耐压<br>Dielectric Withstanding Voltage | JIS C5201 4.7 | 无击穿、飞弧及可见机械性损伤<br>No evidence of flashover,mechanical damage arcing or insulation breakdown |
| 短时间过负荷<br>Short-Time Overload | JIS C5201 4.13 | ±(1.0%+0.05Ω)Max(最大) |
| 端子弯曲<br>Board Flex | AEC-Q200-005 | ±(1.0%+0.05Ω)Max(最大) |
| 抗焊锡热<br>Resistance to Soldering Heat | MIL-STD-202<br>METHOD 210 | ±(1.0%+0.05Ω)Max(最大) |
| 负荷寿命<br>Operational Life | MIL-STD-202<br>METHOD 108 | ±(2.0%+0.05Ω)Max(最大) |
| 耐湿特性<br>Biased Humidity | MIL-STD-202<br>METHOD 103 | ±(2.0%+0.05Ω)Max(最大) |
| 温度循环<br>Temperature Cycling | JESD22<br>METHOD JA-104 | ±(2.0%+0.05Ω)Max(最大) |
| 温湿循环<br>Moisture resistance | MIL-STD-202<br>METHOD 106 | ±(2.0% +0.05Ω) Max (最大) |
| 高温储存<br>High Temperature Exposure(Storage) | MIL-STD-202<br>METHOD 108 | ±(1.0% +0.05Ω) Max (最大) |
| ESD试验<br>ESD test | AEC-Q200-002 | ±(3.0% +0.05Ω) Max (最大) |
| 抗硫化试验<br>Sulfurstion Test | ASTM-B-809-95 | ±(3.0% +0.05Ω) Max (最大) |

DOHAST 多好电子 电话：0755-23170910

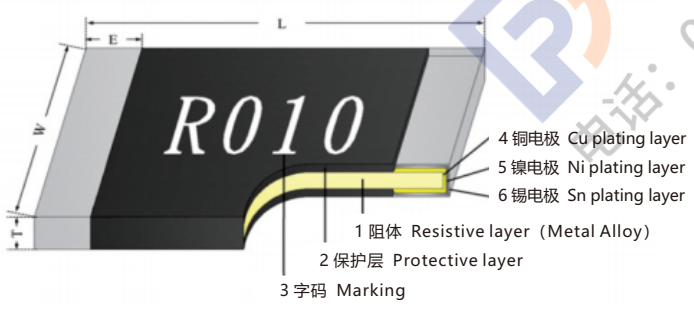
## 特性 Features

优异的电阻温度系数 Excellent temperature coefficient characteristics
优异的低温度电动势能 Excellent Low Thermal EMF
产品符合RoHS与无卤要求 Products meet RoHS com pliant & Halogen free requirements
保护层材质符合UL-94-V0耐燃等级 Over-Coarting meet UL-94-V0 grade

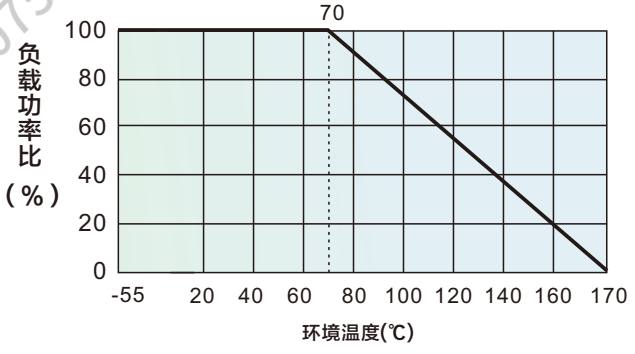
## 应用 Application

电源供应器 Power supply
笔记本计算机Note Book
汽车电子Automotives
电池充电器Battery charger

## 构造 Construction




## 功率衰减曲线 Power Derating Curve




## 订货方式（例如:2512 1% 2W 10mΩ）
## Ordering Procedure（Example:2512 1% 2W 10mΩ）
## 料号（Part Number）：RM2512FBR010GM

| RM | 2512 | F | B | R010 | G | M |
|---|---|---|---|---|---|---|
| 类型（Type）<br>RM:合金贴片电阻（Metal Current Sensing Chip Resistors） | 尺寸（Size）<br>1206<br>2512 | 公差<br>Tolerance<br>F=±1%<br>G=±2%<br>J=±5% | 额定功率<br>Rated Power<br>B=2W<br>D=1.5W<br>1=1W<br>3=1/2W | 阻值<br>Resistance Value<br>R002=2mΩ<br>R010=10mΩ<br>2L50=2.5mΩ | 包装代码<br>Packing Code<br>G=Reel(卷装)<br>V=Bulk（散料）<br>S=Double Standard Quantity（两倍卷盘标准包装量） | 材料<br>Material<br>M=MnCu<br>N=NiCu<br>S=CuMnSn |

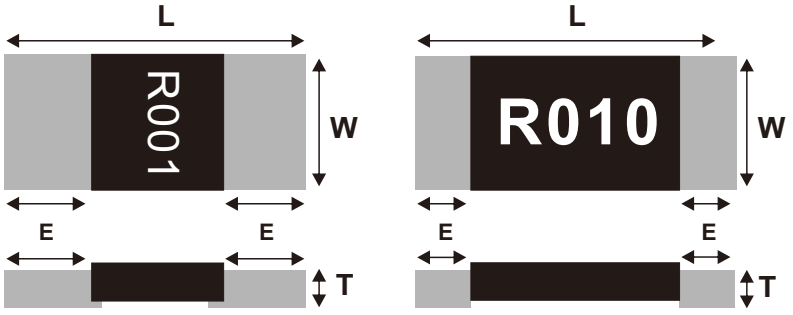
DGPHNST 華年 电话：0755-83173910

## 特性 Characteristics

| 类型 Type | RM1206 | RM2512 |
|---|---|---|
| 额定功率<br>Rated Power at 70℃ | 1/2W、1W | 1W、1.5W、2W |
| 温度特性TCR<br>(ppm/℃) | +25℃~+125℃: ±50 | +25℃~+125℃: ±50 |
| | +25℃~+155℃: ±65 | +25℃~+155℃: ±65 |
| 绝缘耐压<br>Dielectric Withstanding Voltage | >100MΩ | >100MΩ |
| 温度操作范围<br>Operating Temperature | -55℃~+170℃ | -55℃~+170℃ |
| 阻值精度范围<br>Resistance Range ±1%、±2%、±5% | 2mΩ~30mΩ | 1mΩ~100mΩ |

DGPHNST 一晨半 电话：0755-23173910

## 外形尺寸 Dimension




| 类型 Type | | RM1206 | RM2512 |
|---|---|---|---|
| 尺寸<br>Dimension | L(mm) | 3.2±0.20 | 6.40±0.20 |
| | W(mm) | 1.6±0.20 | 3.20±0.20 |
| | T(mm) | 0.60±0.20(2mΩ≦R≦30mΩ) | 0.60±0.20 |
| | E(mm) | 0.50±0.30(2mΩ≦R≦30mΩ) | 2.00±0.20 (R≦2mΩ) |
| | | | 0.90±0.20(R>2mΩ) |

## 性能 Performance Specifications

| 内容 Item | 测试方法 Test Methods | 规格 Specification Limits |
|---|---|---|
| 温度系数<br>Temperature Coefficient | IEC60115-1 4.8 | 如規格表,<br>As Spec.+25~+125℃: ±50ppm/℃<br>+25~+155℃: ±65 ppm/℃ |
| 高温储存<br>High Temperature Exposure(Storage) | MIL-STD-202 Method 108 | <±1% |
| 低温储存<br>Low Temperature operation | IEC60115-1 4.23.4 | <±0.5% |
| 温度循环<br>Temperature Cycling | JESD22 Method JA-104 | <±0.5% |
| 短时间过负荷<br>Short-Time Overload | IEC60115-1 4.13 | <±0.5% |
| 耐湿特性<br>Humidity | MIL-STD-202 METHOD 103 | <±0.5% |
| 负荷寿命<br>Load Life | MIL-STD-202 METHOD 108 | <±1% |
| 焊锡性<br>Solderability | J-STD-002B test B | 最少95%面积上锡 Min 95% coverage |
| 抗焊锡热<br>Resist to Soldering Heat | IEC60115-1 4.18 | <±0.5% |
| 机械冲击<br>Mechanical Shock | MIL-STD-202 METHOD 213 | <±0.5% |
| 抗振动性<br>Resistance to vibration | MIL-STD-202 METHOD 204 | <±0.5% |
| 端子弯曲<br>Terminal Bending | IEC 60115-1-4.33 | <±0.5% |
| 端子强度<br>Terminal Strength | IEC 60115-1-4.32 | <±1% |
| 冷热冲击<br>Thermal shock | MIL-STD-202 METHOD 107 | <±0.5% |
| 阻燃性<br>Flammability | UL-94 | / |
| ESD试验<br>ESD test | IEC 61000-4-2 | <±1% |

DGPHNST 華平 电话：0755-23173910

## 特性 Features

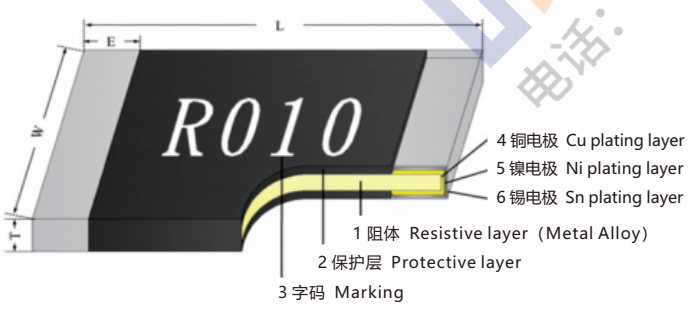
超低电阻温度系数 Low TCR
超低热电动势能 Low EMF.
良好散热效果 Good heat dissipation.
符合AEC-Q200产品认证 AECQ200 qualification*

## 应用 Application

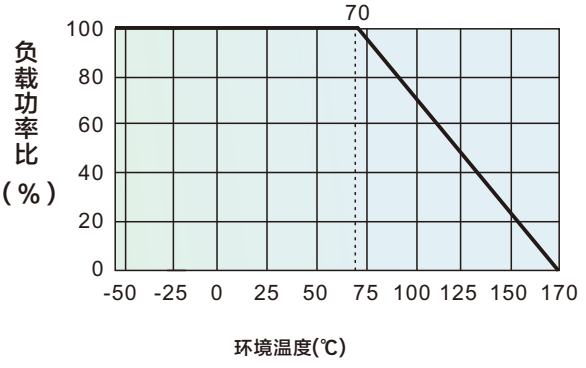
笔记本电脑 Note Book/Laptop
电源供应器 Power Supply
电池保护板 Battery Protection Module
变频器 Converter
电信设备 Telecommunications equipment
电源供应器 Power supply
汽车电子 Automotive electronics

DGPIAST 華年
电话：0755-23173910

## 构造 Construction




## 功率衰减曲线 Power Derating Curve




## 订货方式（例如2512 2W 1% 10mΩ)
## Ordering Procedure（Example 2512 2W 1% 10mΩ)
## 料号（Part Number）：AM2512FBR010GM

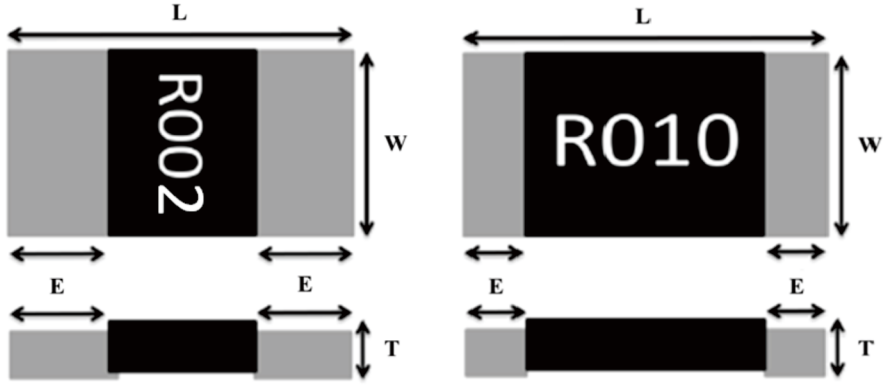
| AM | 2512 | F | B | R010 | G | M |
|---|---|---|---|---|---|---|
| 类型（Type）<br>AM: 车用合金贴片电阻(Metal current sensing chip resistors for Automotive) | 尺寸 (Size)<br>1206<br>2512 | 公差 Tolerance<br>F=±1%<br>G=±2%<br>J=±5% | 额定功率 Rated Power<br>B= 2W<br>D=1.5W<br>1= 1W<br>3= 1/2W | 阻值 Resistance Value<br>R001=1mΩ<br>R005=5mΩ<br>R010=10mΩ<br>2L50=2.5mΩ | 包装代码 Packing Code<br>G=Reel(卷装)<br>V=Bulk（散料）<br>S=Double Standard Quantity（两倍卷盘标准包装量） | 材料 Material<br>M=MnCu<br>N=NiCu<br>S=CuMnSn |

## 特性 Characteristics

| 类型 Type | AM1206 | AM2512 |
|---|---|---|
| 额定功率 70℃Rated Power at 70℃ | 1/2W,1W | 1W,1.5W,2W |
| 温度特性TCR (ppm/℃) | +25℃~+125℃:±50 | +25℃~+125℃:±50 |
| | +25℃~+155℃:±65 | +25℃~+155℃:±65 |
| 绝缘耐压 Dielectric Withstanding Voltage | >100MΩ | >100MΩ |
| 操作温度范围 Operating Temperature | -55~+170℃ | -55~+170℃ |
| 阻值精度范围 F(±1%)、G(±2%)、J(±5%) Resistance Range | 2mΩ~30mΩ | 1mΩ~100mΩ |

DGPHNST 華正
电话：0755-23173910

## 外形尺寸 Dimension




| 类型 Type | | AM1206 | AM2512 |
|---|---|---|---|
| 尺寸 Dimension | L(mm) | 3.20±0.20 | 6.40±0.20 |
| | W(mm) | 1.60±0.20 | 3.20±0.20 |
| | T(mm) | 0.60±0.20 | 0.60±0.20 |
| | E(mm) | 0.50±0.30 | 2.00±0.20(R≦2mΩ) |
| | | | 0.90±0.20(R≧3mΩ) |

## 性能 Performance Specifications

| 内容 Item | 测试方法 Test Methods | 规格 Specification Limits |
|---|---|---|
| 温度系数<br>Temperature Coefficient | IEC60115-1 4.8 | 参照规格表<br>As Spec. |
| 高温储存<br>High Temperature Exposure(Storage) | MIL-STD-202 Method 108 | <±1% |
| 低温储存<br>Low Temperature operation | IEC60115-1 4.23.4 | <±1% |
| 温度循环<br>Temperature Cycling | JESD22 Method JA-104 | <±1% |
| 短时间过负荷<br>Short-Time Overload | IEC60115-1 4.13 | <±1% |
| 耐湿特性<br>Humidity | MIL-STD-202 METHOD 103 | <±1% |
| 负荷寿命<br>Load Life | MIL-STD-202 METHOD 108 | <±1% |
| 焊锡性<br>Solderability | J-STD-002B test B | 最少95%面积上锡 Min 95% coverage |
| 抗焊锡热<br>Resist to Soldering Heat | IEC60115-1 4.18 | <±1% |
| 机械冲击<br>Mechanical Shock | MIL-STD-202 METHOD 213 | <±1% |
| 抗振动性<br>Resistance to vibration | MIL-STD-202 METHOD 204 | <±1% |
| 端子弯曲<br>Terminal Bending | AEC-Q200-005 | <±1% |
| 端子强度<br>Terminal Strength | AEC-Q200-006 | <±1% |
| 冷热冲击<br>Thermal shock | MIL-STD-202 METHOD 107 | <±1% |
| 阻燃性<br>Flammability | UL-94 | / |
| ESD试验<br>ESD test | AEC-Q200-002 | <±1% |

DGPHNST 鑫宇 电话：0755-23173910

## 特性 Features

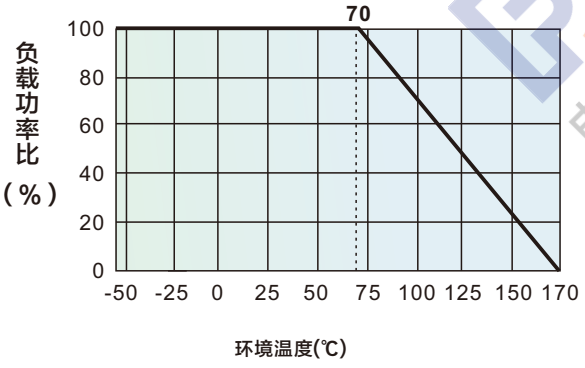
阻值最低到0.2mΩ，尺寸最大到5930 Min. Resistance value to 0.2mΩ and max. Size to 5930
额定功率最大到7W Power rating max. to 7 w.
超低阻值，适用于检测大电流 Ultra low resistance,suitable for large current sensing.
产品符合RoHS与无卤要求 Products meet RoHS compliant & Free requirements
符合AEC-Q200相关条款 AEC-Q200 qualified

## 应用 Application

车载模块检测 Current Sensing for module of automobiles.
变频器 Frequency converters
通信系统 Communication system
混合应用的电源电流传感器 Current sensor for power hydrid applications

DGPHNST 肇丰
电话：0755-23173910

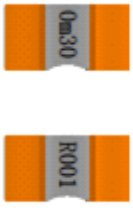
## 功率衰减曲线 Power Derating Curve



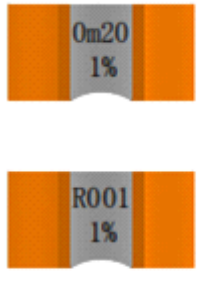

## 分流器本体字码标示(Marking on the Shunt Resistor's Body):

※±1%,±2%,±5%的产品，以四字码标示，第一位字码”R”标示10-3，后三位表示阻值的有效数字。第二位字码”m”表示阻值小数点。
±1%,±2%,±5% tolerance product: the marking is 4 digits, The first letter‘R’ denotes 10-3,The other three digitals declare resistance. The second letter‘m’ mean point.

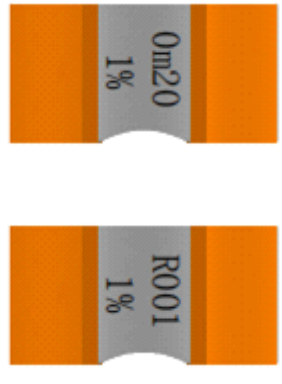
**2512**




**3920**




**5930**



## 订货方式（例如3920 5W 1% 1mΩ）
## Ordering Procedure（Example 3920 5W 1% 1mΩ)
## 料号（Part Number）：RZ3920FRR001G

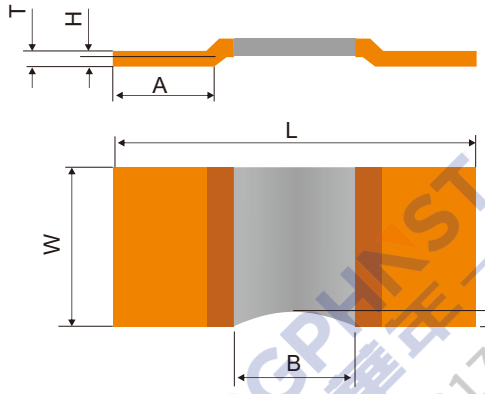
| RZ | 3920 | F | R | R001 | G |
|---|---|---|---|---|---|
| 类型（Type）<br>RZ:低阻分流器贴片电阻 (Low-Resistance Shunt chip resistors) | 尺寸 (Size)<br>2512<br>3920<br>5930 | 公差 Tolerance<br>F=±1%<br>G=±2%<br>J=±5% | 额定功率 Rated Power<br>C= 3W<br>R=5W<br>S=7W | 阻值 Resistance Value<br>R001=1mΩ<br>0L50=0.5mΩ | 包装代码 Packing Code<br>G=Reel(卷装)<br>V=Bulk（散料）<br>S=Double Standard Quantity（两倍卷盘标准包装量） |

DGPHKT 肇仟
电话：0755-23173910

## 特性 Characteristics

| 类型 Type | RZ2512 | | RZ3920 | | RZ5930 | |
|---|---|---|---|---|---|---|
| 额定功率 70℃Rated Power at 70℃ | 3W | | 5W | | 7W | |
| 温度特性TCR (ppm/℃) | ±150 | ±75 | ±150 | ±75 | ±150 | ±75 |
| 绝缘阻抗 Insulation Resistance | >100MΩ | >100MΩ | >100MΩ | >100MΩ | >100MΩ | >100MΩ |
| 操作温度范围 Operating Temperature | -55~+170℃ | -55~+170℃ | -55~+170℃ | -55~+170℃ | -55~+170℃ | -55~+170℃ |
| 阻值精度范围(mΩ) F(±1%)、G(±2%)、J(±5%) Resistance Range(mΩ) | 0.3、0.35、0.4、0.5、0.7、1 | 2 | 0.2、0.3、0.5、0.7 | 1、2、3、4、5 | 0.2、0.3、0.4、0.5、0.75、0.8 | 1、2、3 |

## 外形尺寸 Dimension




备注: 侧边圆弧为调阻缺口
Note :The circular arc is trimmer gap

DGPHAST 肇庆市一 电话：0755-23173910

| 类型 Type | 阻值(mΩ) Resistance | B(mm) | W(mm) | L(mm) | A(mm) | H(mm) | T(mm) |
|---|---|---|---|---|---|---|---|
| RZ2512 | 0.3 | 3.0±0.3 | 3.2±0.25 | 6.4±0.2 | 1.2±0.2 | 0.5±0.1 | 0.95±0.1 |
| | 0.35 | | | | | | 0.60±0.1 |
| | 0.4 | | | | | | 0.88±0.1 |
| | 0.5 | | | | | | 0.85±0.1 |
| | 0.7 | | | | | | 0.60±0.1 |
| | 1 | | | | | | 0.42±0.1 |
| | 2 | | | | | | 0.67±0.1 |
| RZ3920 | 0.2 | 4.5±0.3 | 5.2±0.3 | 10±0.2 | 2.0±0.2 | 0.5±0.1 | 1.66±0.1 |
| | 0.3 | | | | | | 1.28±0.1 |
| | 0.5 | | | | | | 0.77±0.1 |
| | 0.7 | | | | | | 0.55±0.1 |
| | 1 | | | | | | 1.25±0.1 |
| | 2 | | | | | | 0.62±0.1 |
| | 3 | | | | | | 0.42±0.1 |
| | 4 | | | | | | 0.35±0.1 |
| | 5 | | | | | | 0.28±0.1 |
| RZ5930 | 0.2 | 5.0±0.3 | 7.7±0.3 | 15±0.2 | 4.2±0.2 | 0.5±0.1 | 1.50±0.1 |
| | 0.3 | | | | | | 0.96±0.1 |
| | 0.4 | | | | | | 0.72±0.1 |
| | 0.5 | | | | | | 0.58±0.1 |
| | 0.75 | | | | | | 0.39±0.1 |
| | 0.8 | | | | | | 0.36±0.1 |
| | 1 | | | | | | 0.94±0.1 |
| | 2 | | | | | | 0.48±0.1 |
| | 3 | | | | | | 0.31±0.1 |

## 性能 Performance Specifications

| 内容 Item | 测试方法 Test Methods | 规格 Specification Limits |
|---|---|---|
| 温度系数<br>Temperature Coefficient | IEC60115-1 4.8 | 参照规格表<br>As Spec. |
| 高温储存<br>High Temperature Exposure(Storage) | MIL-STD-202 Method 108 | <±1% |
| 低温储存<br>Low Temperature operation | IEC60115-1 4.23.4 | <±1% |
| 温度循环<br>Temperature Cycling | JESD22 Method JA-104 | <±1% |
| 短时间过负荷<br>Short-Time Overload | IEC60115-1 4.13 | <±1% |
| 耐湿特性<br>Humidity | MIL-STD-202 METHOD 103 | <±1% |
| 负荷寿命<br>Load Life | MIL-STD-202 METHOD 108 | <±1% |
| 焊锡性<br>Solderability | J-STD-002B test B | 最少95%面积上锡 Min 95% coverage |
| 抗焊锡热<br>Resist to Soldering Heat | IEC60115-1 4.18 | <±1% |
| 机械冲击<br>Mechanical Shock | MIL-STD-202 METHOD 213 | <±1% |
| 抗振动性<br>Resistance to vibration | MIL-STD-202 METHOD 204 | <±1% |
| 端子弯曲<br>Terminal Bending | AEC-Q200-005 | <±1% |
| 端子强度<br>Terminal Strength | AEC-Q200-006 | <±1% |
| 冷热冲击<br>Thermal shock | MIL-STD-202 METHOD 107 | <±1% |
| ESD试验<br>ESD test | AEC-Q200-002 | <±1% |

DGPHNST 鑫宇 电话：0755-23173910

## 特性 Features

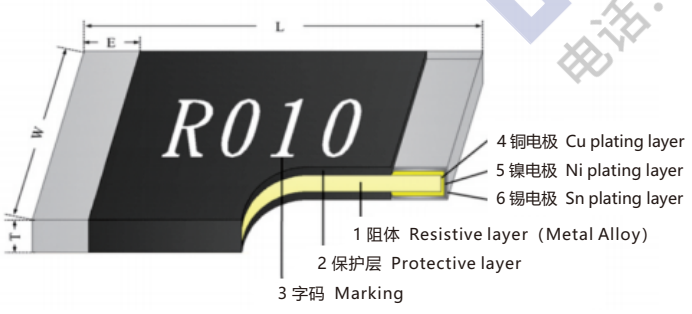
最大使用功率 3W Max power rating to 3watt
超低电阻温度系数 Low TCR
超低热电动势能 Low EMF.
良好散热效果 Good heat dissipation.
符合AEC-Q200产品认证 AECQ200 qualification*

## 应用 Application

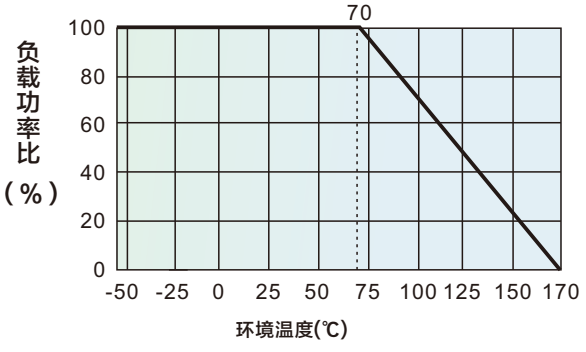
电源供应器 Power Supply
电池管理系统 BMS
变频器 Converter
电信设备 Telecommunications equipment
电源供应器 Power supply
汽车电子 Automotive electronics

DGHNST 肇丰 电话：0755-23179910

## 构造 Construction




## 功率衰减曲线 Power Derating Curve




## 订货方式（例如2512 3W 1% 10mΩ）
## Ordering Procedure（Example 2512 3W 1% 10mΩ）
## 料号（Part Number）：RM2512FCR010GM

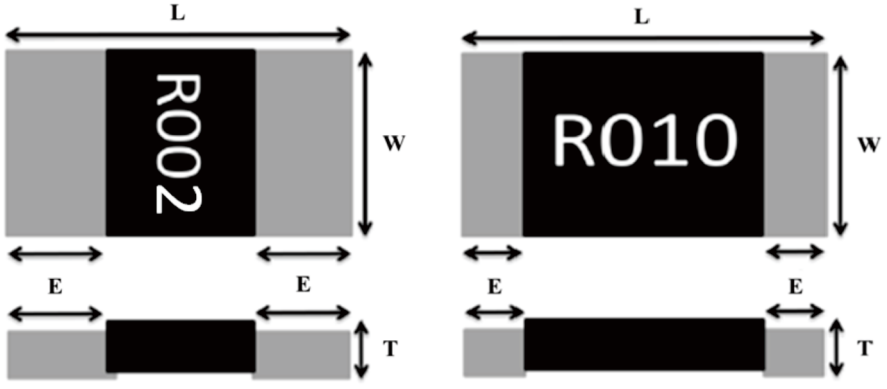
| RM | 2512 | F | C | R010 | G | M |
|---|---|---|---|---|---|---|
| **类型 (Type)**<br>RM: RM 3W高功率合金贴片电阻 (High Power Metal Current Sensing Chip Resistors for RM 3W) | **尺寸 (Size)**<br>2512 | **公差 Tolerance**<br>F=±1%<br>G=±2%<br>J=±5% | **额定功率 Rated Power**<br>C= 3W | **阻值 Resistance Value**<br>R002=2mΩ<br>R010=10 mΩ<br>2L50=2.5mΩ | **包装代码 Packing Code**<br>G=Reel(卷装)<br>V=Bulk（散料）<br>S=Double Standard Quantity（两倍卷盘标准包装量） | **材料 Material**<br>M=MnCu<br>N=NiCu<br>S=CuMnSn |

## 特性 Characteristics

| 类型 Type | RM2512 |
|---|---|
| 额定功率<br>70℃Rated Power at 70℃ | 3W |
| 温度特性TCR<br>(ppm/℃) | +25℃~+125℃:±50 |
| | +25℃~+155℃:±65 |
| 绝缘耐压<br>Dielectric Withstanding Voltage | >100MΩ |
| 操作温度范围<br>Operating Temperature | -55~+170℃ |
| 阻值精度范围<br>F(±1%)、G(±2%)、J(±5%)<br>Resistance Range | 1mΩ~10mΩ |

DGPHNST 華年 电话：0755-23173910

## 外形尺寸 Dimension




| 类型 Type | | RM2512 |
|---|---|---|
| 尺寸<br>Dimension | L(mm) | 6.40±0.20 |
| | W(mm) | 3.20±0.20 |
| | T(mm) | 0.60±0.20 |
| | E(mm) | 2.00±0.20(R≦2mΩ) |
| | | 0.90±0.20(R≧3mΩ) |

## 性能 Performance Specifications

| 内容 Item | 测试方法 Test Methods | 规格 Specification Limits |
|---|---|---|
| 温度系数<br>Temperature Coefficient | IEC60115-1 4.8 | 参照规格表<br>As Spec. |
| 高温储存<br>High Temperature Exposure(Storage) | MIL-STD-202 Method 108 | <±1% |
| 低温储存<br>Low Temperature operation | IEC60115-1 4.23.4 | <±1% |
| 温度循环<br>Temperature Cycling | JESD22 Method JA-104 | <±1% |
| 短时间过负荷<br>Short-Time Overload | IEC60115-1 4.13 | <±1% |
| 耐湿特性<br>Humidity | MIL-STD-202 METHOD 103 | <±1% |
| 负荷寿命<br>Load Life | MIL-STD-202 METHOD 108 | <±2% |
| 焊锡性<br>Solderability | J-STD-002B test B | 最少95%面积上锡 Min 95% coverage |
| 抗焊锡热<br>Resist to Soldering Heat | IEC60115-1 4.18 | <±0.5% |
| 机械冲击<br>Mechanical Shock | MIL-STD-202 METHOD 213 | <±0.5% |
| 抗振动性<br>Resistance to vibration | MIL-STD-202 METHOD 204 | <±0.5% |
| 端子弯曲<br>Terminal Bending | AEC-Q200-005 | <±0.5% |
| 端子强度<br>Terminal Strength | AEC-Q200-006 | <±1% |
| 冷热冲击<br>Thermal shock | MIL-STD-202 METHOD 107 | <±1% |
| 阻燃性<br>Flammability | UL-94 | / |
| ESD试验<br>ESD test | AEC-Q200-002 | <±1% |

DGPHNST 肇平 电话：0755-23173910

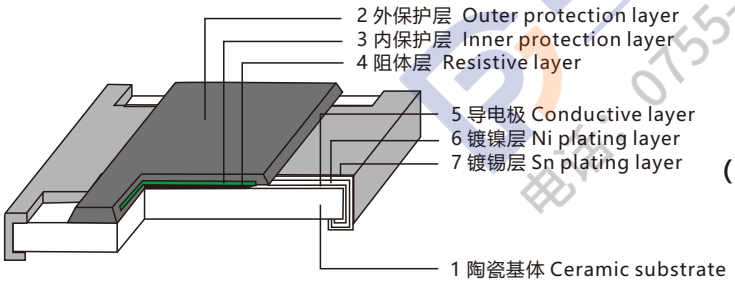
## 特性 Features

铅含量＜100ppm
适合贴片机组装 Suitable for SMT
短小轻薄 Small Size & Light Weight
符合RoHS和无卤标准 Meet RoHS & HF Requirement

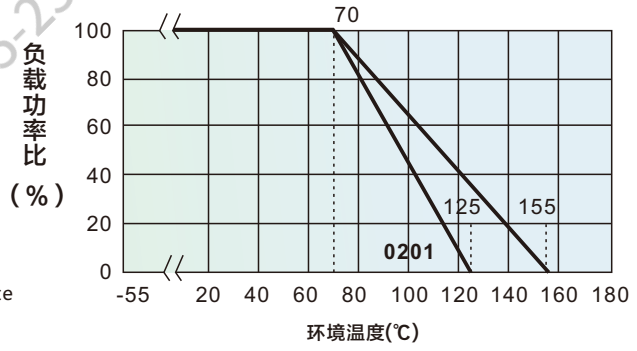
## 应用 Application

一般用途General Purpose
通用型Universal type

## 构造 Construction




## 功率衰减曲线 Power Derating Curve




## 订货方式（例如:0603 5% 1/10W 100Ω）
## Ordering Procedure（Example: 0603 1/10W 5% 100Ω）
## 料号（Part Number）：PF0603JA0101G

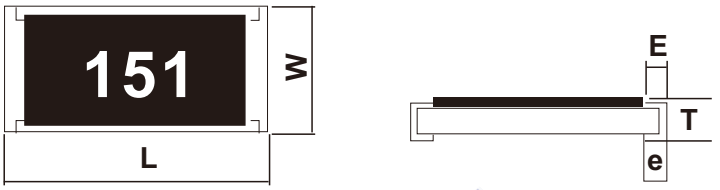
| PF | 0603 | J | A | 0101 | G |
|---|---|---|---|---|---|
| 类型（Type）<br>PF:无铅厚膜贴片电阻（Total Lead Free Thick Film Chip Resistors） | 尺寸（Size）<br>0201<br>0402<br>0603<br>0805<br>1206<br>1210<br>2010<br>2512 | 公差<br>Tolerance<br>B=±0.1%<br>D=±0.5%<br>F=±1%<br>G=±2%<br>J=±5% | 额定功率<br>Rated Power<br>1=1W<br>2=3/4W<br>3=1/2W<br>4=1/4W<br>8=1/8W<br>A=1/10W<br>F=1/16W<br>H=1/20W | 阻值<br>Resistance Value<br>±1%,±0.5%,±0.1%<br>49R9=49.9Ω<br>1002=10KΩ<br>±2%,±5%:<br>06R8=6.8Ω<br>0564=560KΩ | 包装代码<br>Packing Code<br>G=Reel(卷装)<br>V=Bulk（散料）<br>S=Double Standard Quantity（两倍卷盘标准包装量） |

## 特性 Characteristics

| 类型 Type | PF0201 | PF0402 | PF0603 | PF0805 | PF1206 | PF1210 | PF2010 | PF2512 |
|---|---|---|---|---|---|---|---|---|
| 额定功率 70℃Rated Power at 70℃ | 1/20W | 1/16W | 1/10W | 1/8W | 1/4W | 1/2W | 3/4W | 1W |
| 最大工作电压 Max Working Voltage | 25V | 50V | 75V | 150V | 200V | 200V | 200V | 200V |
| 最大过负荷电压 Max Overload Voltage | 50V | 100V | 150V | 300V | 400V | 500V | 500V | 500V |
| 绝缘耐压 WithStanding Voltage Dielectric | 75V | 150V | 220V | 430V | 570V | 710V | 710V | 710V |
| 操作温度范围 Operating Temperature | -55～+125℃ | -55～+155℃ | -55～+155℃ | -55～+155℃ | -55～+155℃ | -55～+155℃ | -55～+155℃ | -55～+155℃ |
| 零欧姆电阻阻值 Resistance Value of Jumper | ＜50mΩ | ＜50mΩ | ＜50mΩ | ＜50mΩ | ＜50mΩ | ＜50mΩ | ＜50mΩ | ＜50mΩ |
| 零欧姆额定电流 Rated Current of Jumper | 0.5A | 1.0A | 1.0A | 2.0A | 2.0A | 2.0A | 2.0A | 2.0A |
| 零欧姆最大电流 Max Current of jumper | 1.0A | 2.0A | 2.0A | 5.0A | 10.0A | 10.0A | 10.0A | 10.0A |
| 0.1%阻值范围 Resistance Range of 0.1% | 100Ω-1MΩ | 100Ω-1MΩ | 100Ω-1MΩ | 100Ω-1MΩ | 100Ω-1MΩ | 100Ω-1MΩ | 100Ω-1MΩ | 100Ω-1MΩ |
| 0.5%阻值范围 Resistance Range of 0.5% | 10Ω-1MΩ | 10Ω-1MΩ | 10Ω-1MΩ | 10Ω-1MΩ | 10Ω-1MΩ | 10Ω-1MΩ | 1Ω-1MΩ | 10Ω-1MΩ |
| 1%阻值范围 Resistance Range of 1% | 1Ω-10MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ |
| 2%阻值范围 Resistance Range of 2% | 1Ω-10MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ |
| 5%阻值范围 Resistance Range of 5% | 1Ω-10MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ |

DGPHNST 肇丰 电话：0755-23173910

## 外形尺寸 Dimension




| 类型 Type | | PF0402 | PF0402 | PF0603 | PF0805 | PF1206 | PF1210 | PF2010 | PF2512 |
|---|---|---|---|---|---|---|---|---|---|
| 尺寸 Dimension | L(mm) | 0.60±0.03 | 1.00±0.05 | 1.60±0.10 | 2.00±0.15 | 3.10±0.15 | 3.10±0.15 | 5.00±0.20 | 6.25±0.20 |
| | W(mm) | 0.30±0.03 | 0.50±0.05 | 0.80±0.10 | 1.25±0.15 | 1.60±0.15 | 2.50±0.15 | 2.50±0.20 | 3.10±0.20 |
| | T(mm) | 0.23±0.03 | 0.30±0.05 | 0.45±0.10 | 0.50±0.10 | 0.55±0.10 | 0.55±0.15 | 0.55±0.15 | 0.55±0.15 |
| | E(mm) | 0.10±0.05 | 0.15±0.10 | 0.25±0.20 | 0.35±0.20 | 0.45±0.25 | 0.35±0.25 | 0.65±0.25 | 0.85±0.25 |
| | e(mm) | 0.15±0.05 | 0.20±0.10 | 0.30±0.20 | 0.40±0.20 | 0.40±0.25 | 0.60±0.25 | 0.50±0.25 | 0.95±0.25 |

## 性能 Performance Specifications

| 内容 Item | 测试方法 Test Methods | 规格 Specification Limits |
|---|---|---|
| 温度系数<br>Temperature Coefficient | JIS C5201 4.8 | 0201规格:<br>1Ω≤R≤10Ω: -100～+300 PPM/℃<br>10Ω＜R≤10MΩ: ±200 PPM/℃<br>0402～2512规格:<br>1Ω≤R≤10Ω: ±200PPM/℃<br>10Ω＜R≤10MΩ: ±100 PPM/℃<br>10MΩ＜R≤22MΩ: ±200 PPM/℃ |
| 焊锡性<br>Solderability | JIS C5201 4.17 | 最少95%面积上锡 Min 95% coverage |
| 绝缘电阻<br>Insulation Resistance | JIS C5201 4.6 | ＞10GΩ |
| 绝缘耐压<br>Dielectric Withstanding Voltage | JIS C5201 4.7 | 无击穿、飞弧及可见机械性损伤<br>No evidence of flashover,mechanical damage arcing or insulation breakdown |
| 短时间过负荷<br>Short-Time Overload | JIS C5201 4.13 | ±(1.0%+0.0.05Ω)Max(最大) |
| 端子弯曲<br>Terminal Bending | JIS C5201 4.33 | ±(1.0%+0.0.05Ω)Max(最大) |
| 抗焊锡热<br>Resist to Soldering Heat | JIS C5201 4.18 | ±(1.0%+0.05Ω)Max(最大) |
| 负荷寿命<br>Load Life | JIS C5201 4.25.1 | ±(2.0%+0.05Ω)Max(最大) |
| 耐湿特性<br>Humidity | JIS C5201 4.24 | ±(2.0%+0.05Ω)Max(最大) |
| 温度循环<br>Temperature Cycling | JIS C5201 4.19 | ±(2.0%+0.05Ω)Max(最大) |
| 温湿循环<br>Moisture Resistance | MIL-STD-202<br>METHOD106 | ±(2.0%+0.05Ω)Max(最大) |

DAPHST 电话：0755-23176011

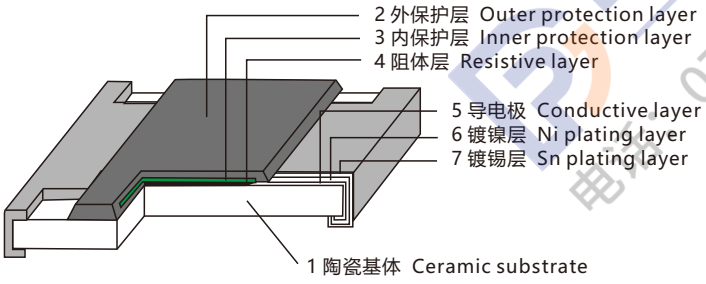
## 特性 Features

适合贴片机组装 Suitable for SMT
符合RoHS和无卤标准 Meet RoHS & HF Requirement
高电压High Voltage

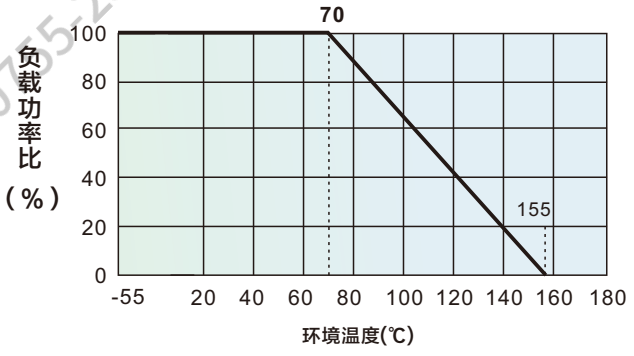
## 应用 Application

相机闪光灯电路Camera Flash Circuit
打印设备 Printing equipment
电源电路 Power Circuit

## 构造 Construction




## 功率衰减曲线 Power Derating Curve



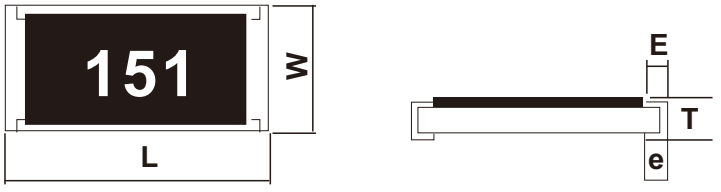

## 订货方式（例如0603 1% 1/10W 47Ω）
## Ordering Procedure（Example 0603 1% 1/10W 47Ω）
## 料号（Part Number）：RC0603FA47R0G

| RC | 0603 | F | A | 47R0 | G |
|---|---|---|---|---|---|
| 类型（Type）<br>RC:高压厚膜贴片电阻(High voltage thick film chip resistors) | 尺寸（Size）<br>0603<br>0805<br>1206<br>1210<br>2010<br>2512 | 公差<br>Tolerance<br>D=±0.5%<br>F=±1%<br>G=±2%<br>J=±5% | 额定功率<br>Rated Power<br>1= 1W<br>2=3/4W<br>3=1/2W<br>4= 1/4W<br>8= 1/8W<br>A= 1/10W | 阻值<br>Resistance Value<br>±1%:<br>47R0=47Ω<br>1002=10KΩ<br>±2%, ±5%：<br>0470=47Ω<br>0564=560KΩ | 包装代码<br>Packing Code<br>G= reel （卷装）<br>V= bulk （散料）<br>S= Double Standard Quantity (两倍卷盘标准包装量) |

## 特性 Characteristics

| 类型 Type | RC0603 | RC0805 | RC1206 | RC1210 | RC2010 | RC2512 |
|---|---|---|---|---|---|---|
| 额定功率 70℃Rated Power at 70℃ | 1/10W | 1/8W | 1/4W | 1/2W | 3/4W | 1W |
| 最大工作电压 Max Working Voltage | 350V | 400V | 500V | 500V | 500V | 500V |
| 最大过负荷电压 Max Overload Voltage | 500V | 800V | 1000V | 1000V | 1000V | 1000V |
| 绝缘耐压 WithStanding Voltage Dielectric | 500V | 800V | 1000V | 1000V | 1000V | 1000V |
| 操作温度范围 Operating Temperature | -55~+155℃ | -55~+155℃ | -55~+155℃ | -55~+155℃ | -55~+155℃ | -55~+155℃ |
| 0.5%阻值范围 Resistance Range of 0.5% | 10Ω-1MΩ | 10Ω-1MΩ | 10Ω-1MΩ | 10Ω-1MΩ | 10Ω-1MΩ | 10Ω-1MΩ |
| 1%阻值范围 Resistance Range of 1% | 1Ω-100MΩ | 1Ω-100MΩ | 1Ω-100MΩ | 1Ω-100MΩ | 1Ω-100MΩ | 1Ω-100MΩ |
| 2%阻值范围 Resistance Range of 2% | 1Ω-100MΩ | 1Ω-100MΩ | 1Ω-100MΩ | 1Ω-100MΩ | 1Ω-100MΩ | 1Ω-100MΩ |
| 5%阻值范围 Resistance Range of 5% | 1Ω-100MΩ | 1Ω-100MΩ | 1Ω-100MΩ | 1Ω-100MΩ | 1Ω-100MΩ | 1Ω-100MΩ |

## 外形尺寸 Dimension




| 类型 Type | | RC0603 | RC0805 | RC1206 | RC1210 | RC2010 | RC2512 |
|---|---|---|---|---|---|---|---|
| 尺寸 Dimension | L(mm) | 1.60±0.10 | 2.00±0.15 | 3.10±0.15 | 3.10±0.15 | 5.00±0.20 | 6.25±0.20 |
| | W(mm) | 0.80±0.10 | 1.25±0.15 | 1.60±0.15 | 2.50±0.15 | 2.50±0.20 | 3.10±0.20 |
| | T(mm) | 0.45±0.10 | 0.50±0.10 | 0.55±0.10 | 0.55±0.15 | 0.55±0.15 | 0.55±0.15 |
| | E(mm) | 0.25±0.20 | 0.35±0.20 | 0.45±0.25 | 0.35±0.25 | 0.65±0.25 | 0.85±0.25 |
| | e(mm) | 0.30±0.20 | 0.40±0.20 | 0.40±0.25 | 0.60±0.25 | 0.50±0.25 | 0.95±0.25 |

DGPHYST 电话：0755-23173910

## 性能 Performance Specifications

| 内容 Item | 测试方法 Test Methods | 规格 Specification Limits |
|---|---|---|
| 温度系数<br>Temperature Coefficient | JIS C5201 4.8 | 1Ω≤R≤10Ω：±200 PPM/℃<br>10Ω<R≤10MΩ：±100 PPM/℃<br>10MΩ<R≤100MΩ：±200PPM/℃ |
| 焊锡性<br>Solderability | JIS C5201 4.17 | 最少95%面积上锡 Min 95% coverage |
| 绝缘电阻<br>Insulation Resistance | JIS C5201 4.6 | > 10GΩ |
| 绝缘耐压<br>Dielectric Withstanding Voltage | JIS C5201 4.7 | 无击穿、飞弧及可见机械性损伤<br>No evidence of flashover,mechanical damage arcing or insulation breakdown |
| 短时间过负荷<br>Short-Time Overload | JIS C5201 4.13 | ±(1.0%+0.0.05Ω)Max(最大) |
| 端子弯曲<br>Terminal Bending | JIS C5201 4.33 | ±(1.0%+0.0.05Ω)Max(最大) |
| 抗焊锡热<br>Resist to Soldering Heat | JIS C5201 4.18 | ±(1.0%+0.05Ω)Max(最大) |
| 负荷寿命<br>Load Life | JIS C5201 4.25.1 | ±(2.0%+0.05Ω)Max(最大) |
| 耐湿特性<br>Humidity | JIS C5201 4.24 | ±(2.0%+0.05Ω)Max(最大) |
| 温度循环<br>Temperature Cycling | JIS C5201 4.19 | ±(2.0%+0.05Ω)Max(最大) |
| 温湿循环<br>Moisture Resistance | MIL-STD-202<br>METHOD106 | ±(2.0%+0.05Ω)Max(最大) |
| 高温储存<br>High Temperature Exposure(Storage) | MIL-STD-202<br>METHOD 108 | ±(1.0%+0.0.05Ω)Max(最大) |

DGPHNST 辜丰 电话：0755-83173910

## 特性 Features

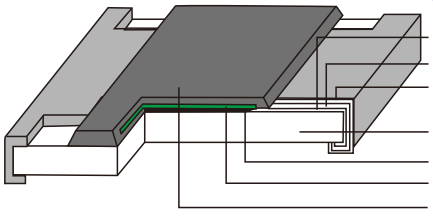
适合贴片机组装 Suitable for SMT
符合RoHS和无卤标准 Meet RoHS & HF Requirement
抗浪涌电压Anti-Surge Voltage

## 应用 Application

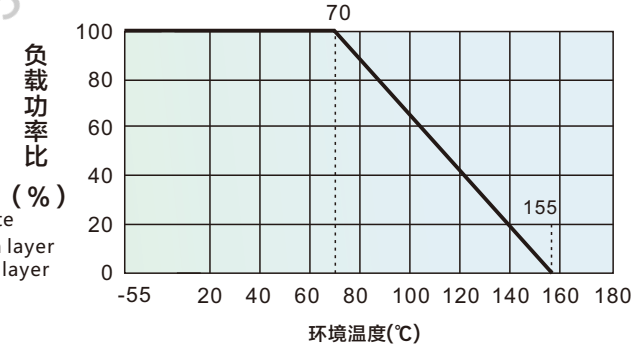
显示器，电源，电脑，数码相机，开关
Monitor, Power, Computer, Digital camera, Switch
医疗设备，军事装备，自动化设备，电信设备
Medical equipment, Military equipment, Automation equipment, Telecommunications equipment

DGPHNST 華年 TEL: 0755-23173910

## 构造 Construction

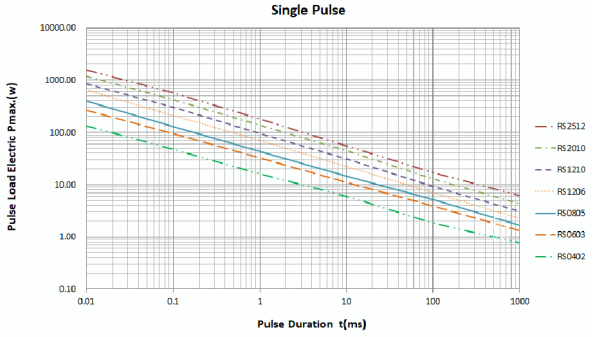



## 功率衰减曲线 Power Derating Curve

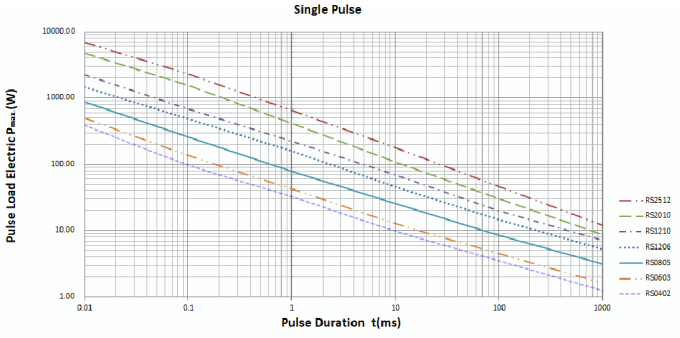



## 脉冲功率曲线 Curve of Pulse Duration

公差Tolerance:
±1.00%、±2.00%如下:




公差Tolerance:
±5.00%、±10.00%、±15.00%、±20.00%如下:



## 订货方式（例如0603 1% 1/10W 47Ω）
## Ordering Procedure（Example 0603 1% 1/10W 47Ω）
## 料号（Part Number）：RS0603FA47R0G

| RS | 0603 | F | A | 47R0 | G |
|---|---|---|---|---|---|
| 类型（Type）<br>RS:抗浪涌厚膜贴片电阻(Anti-surge thick film chip resistors) | 尺寸（Size）<br>0402<br>0603<br>0805<br>1206<br>1210<br>2010<br>2512 | 公差<br>Tolerance<br>F=±1%<br>G=±2%<br>J=±5%<br>K=±10%<br>L=±15%<br>M=±20% | 额定功率<br>Rated Power<br>1=1W<br>2=3/4W<br>3=1/2W<br>4=1/4W<br>8=1/8W<br>A=1/10W<br>F=1/16W | 阻值<br>Resistance Value<br>±1%:<br>49R9=49.9Ω<br>1002=10KΩ<br>±2%, ±5%,<br>±10%, ±15%,<br>±20%:<br>06R8=6.8Ω<br>0564=560KΩ | 包装代码<br>Packing Code<br>G=Reel(卷装)<br>V=Bulk（散料）<br>S=Double Standard Quantity（两倍卷盘标准包装量） |

DGRNST 一星年 电话：0755-23173913

## 特性 Characteristics

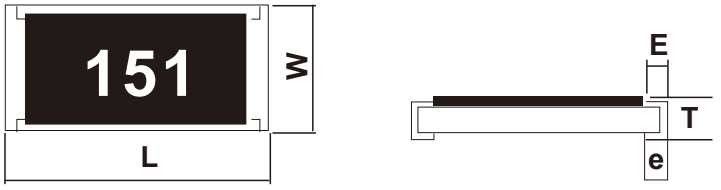
| 类型 Type | RS0402 | RS0603 | RS0805 | RS1206 | RS1210 | RS2010 | RS2512 |
|---|---|---|---|---|---|---|---|
| 额定功率 70℃Rated Power at 70℃ | 1/10W | 1/8W | 1/4W | 1/2W | 3/4W | 3/4W | 1W |
| 最大工作电压 Max Working Voltage | 50V | 75V | 150V | 200V | 200V | 200V | 200V |
| 最大过负荷电压 Max Overload Voltage | 100V | 150V | 300V | 400V | 500V | 500V | 500V |
| 绝缘耐压 WithStanding Voltage Dielectric | 150V | 220V | 430V | 570V | 710V | 710V | 710V |
| 操作温度范围 Operating Temperature | -55~+155℃ | -55~+155℃ | -55~+155℃ | -55~+155℃ | -55~+155℃ | -55~+155℃ | -55~+155℃ |
| 1%阻值范围 Resistance Range of 1% | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ |
| 2%阻值范围 Resistance Range of 2% | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ |

## 特性 Characteristics

| 类型 Type | RS0402 | RS0603 | RS0805 | RS1206 | RS1210 | RS2010 | RS2512 |
|---|---|---|---|---|---|---|---|
| 5%阻值范围 Resistance Range of 5% | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ |
| 10%阻值范围 Resistance Range of 10% | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ |
| 15%阻值范围 Resistance Range of 15% | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ |
| 20%阻值范围 Resistance Range of 20% | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ | 1Ω-22MΩ |

DGPHNST 霏芊 电话：0755-23173910

## 外形尺寸 Dimension




| 类型 Type | | RS0402 | RS0603 | RS0805 | RS1206 | RS1210 | RS2010 | RS2512 |
|---|---|---|---|---|---|---|---|---|
| 尺寸 Dimension | L(mm) | 1.00±0.05 | 1.60±0.10 | 2.00±0.15 | 3.10±0.15 | 3.10±0.15 | 5.00±0.20 | 6.25±0.20 |
| | W(mm) | 0.50±0.05 | 0.80±0.10 | 1.25±0.15 | 1.60±0.15 | 2.50±0.15 | 2.50±0.20 | 3.10±0.20 |
| | T(mm) | 0.30±0.05 | 0.45±0.10 | 0.50±0.10 | 0.55±0.10 | 0.55±0.15 | 0.55±0.15 | 0.55±0.15 |
| | E(mm) | 0.15±0.10 | 0.25±0.20 | 0.35±0.20 | 0.45±0.25 | 0.35±0.25 | 0.65±0.25 | 0.85±0.25 |
| | e(mm) | 0.20±0.10 | 0.30±0.20 | 0.40±0.20 | 0.40±0.25 | 0.60±0.25 | 0.50±0.25 | 0.95±0.25 |

## 性能 Performance Specifications

| 内容 Item | 测试方法 Test Methods | 规格 Specification Limits |
|---|---|---|
| 温度系数<br>Temperature Coefficient | JIS C5201 4.8 | 1Ω≦R≦10Ω：±200 PPM/℃<br>10Ω<R≦10MΩ：±100 PPM/℃<br>10MΩ<R≦100MΩ：±200PPM/℃ |
| 焊锡性<br>Solderability | JIS C5201 4.17 | 最少95%面积上锡 Min 95% coverage |
| 绝缘电阻<br>Insulation Resistance | JIS C5201 4.6 | >10GΩ |
| 绝缘耐压<br>Dielectric Withstanding Voltage | JIS C5201 4.7 | 无击穿、飞弧及可见机械性损伤<br>No evidence of flashover,mechanical damage arcing or insulation breakdown |
| 短时间过负荷<br>Short-Time Overload | JIS C5201 4.13 | ±(1.0%+0.0.05Ω)Max(最大) |
| 端子弯曲<br>Terminal Bending | JIS C5201 4.33 | ±(1.0%+0.0.05Ω)Max(最大) |
| 抗焊锡热<br>Resist to Soldering Heat | JIS C5201 4.18 | ±(1.0%+0.05Ω)Max(最大) |
| 负荷寿命<br>Load Life | JIS C5201 4.25.1 | ±(2.0%+0.05Ω)Max(最大) |
| 耐湿特性<br>Humidity | JIS C5201 4.24 | ±(2.0%+0.05Ω)Max(最大) |
| 温度循环<br>Temperature Cycling | JIS C5201 4.19 | ±(2.0%+0.05Ω)Max(最大) |
| 温湿循环<br>Moisture Resistance | MIL-STD-202<br>METHOD106 | ±(2.0%+0.05Ω)Max(最大) |
| 高温储存<br>High Temperature Exposure(Storage) | MIL-STD-202<br>METHOD 108 | ±(1.0%+0.0.05Ω)Max(最大) |
| 脉冲<br>Pulse | IEC 60115-1 4.27 | ±(2.0%+0.05Ω)Max(最大) |

DGPHNST 晶华 电话：0755-23173910

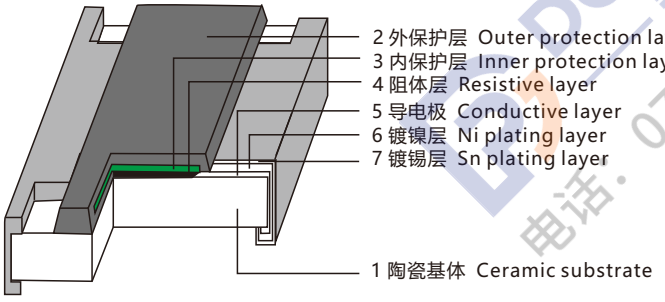
## 特性 Features

适合贴片机组装 Suitable for SMT
符合RoHS和无卤标准 Meet RoHS & HF Requirement
宽电极Wide Terminal

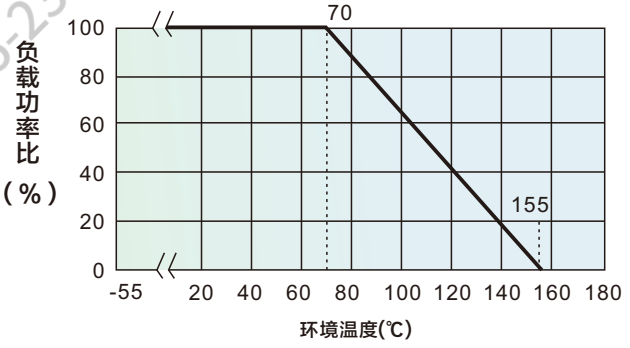
## 应用 Application

电源供应器 Power supply
开关电源 Switching power supply
电压调节器 Voltage regulator

## 构造 Construction




## 功率衰减曲线 Power Derating Curve




## 订货方式（例如1225 1% 2W 20Ω）
## Ordering Procedure（Example 1225 1% 2W 20Ω）
## 料号（Part Number）：RW1225FB20R0G

| RW | 1225 | F | B | 20R0 | G |
|---|---|---|---|---|---|
| 类型（Type）<br>RW: 宽电极厚膜贴片电阻<br>(Wide Terminal thick film chip resistors) | 尺寸（Size）<br>0612<br>1020<br>1225 | 公差<br>Tolerance<br>F=±1%<br>J=±5% | 额定功率<br>Rated Power<br>1= 1W<br>2=3/4W<br>B= 2W | 阻值<br>Resistance Value<br>±1%：<br>20R0=20Ω<br>49R9=49.9Ω<br>1002=10KΩ<br>±5%：<br>06R8=6.8Ω<br>0200=20Ω<br>0564=560KΩ | 包装代码<br>Packing Code<br>G= reel （卷装）<br>V= bulk （散料）<br>S= Double Standard Quantity (两倍卷盘标准包装量) |

## 标准包装数量 Standard Packing Quantity

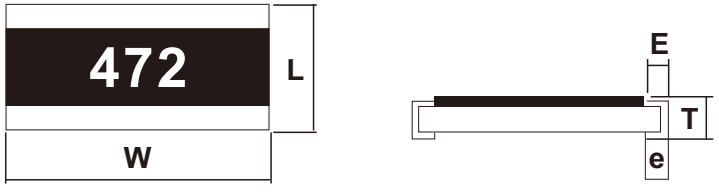
0612：5,000Pcs Per Reel(每卷5,000Pcs)
1020/1225：4,000Pcs Per Reel(每卷4,000Pcs)

## 特性 Characteristics

| 类型 Type | RW0612 | RW1020 | RW1225 |
|---|---|---|---|
| 额定功率 70℃Rated Power at 70℃ | 3/4W | 1W | 2W |
| 最大工作电压 Max Working Voltage | 200V | 200V | 200V |
| 最大过负荷电压 Max Overload Voltage | 400V | 400V | 400V |
| 绝缘耐压 Dielectric Withstanding Voltage | 570V | 710V | 710V |
| 操作温度范围 Operating Temperature | -55~+155℃ | -55~+155℃ | -55~+155℃ |
| 零欧姆阻值 Resistance Value of Jumper | <50mΩ | <50mΩ | <50mΩ |
| 零欧姆额定电流 Rated Current of Jumper | 2.0A | 2.0A | 2.0A |
| 零欧姆电阻最大电流 Max Current of Jumper | 10.0A | 10.0A | 10.0A |
| 1%阻值范围 Resistance Range of 1% | 1Ω-1MΩ | 1Ω-1MΩ | 1Ω-1MΩ |
| 5%阻值范围 Resistance Range of 5% | 1Ω-1MΩ | 1Ω-1MΩ | 1Ω-1MΩ |

DGPHNST 華年
电话：0755-23173910

## 外形尺寸 Dimension




| 类型 Type | | RW0612 | RW1020 | RW1225 |
|---|---|---|---|---|
| 尺寸 Dimension | L(mm) | 1.60±0.15 | 2.50±0.15 | 3.10±0.15 |
| | W(mm) | 3.20±0.20 | 5.00±0.15 | 6.30±0.15 |
| | T(mm) | 0.60±0.10 | 0.60±0.10 | 0.60±0.10 |
| | E(mm) | 0.30±0.20 | 0.40±0.20 | 0.45±0.20 |
| | e(mm) | 0.45±0.15 | 0.75±0.15 | 0.75±0.15 |

## 性能 Performance Specifications

| 内容 Item | 测试方法 Test Methods | 规格 Specification Limits |
|---|---|---|
| 温度系数<br>Temperature Coefficient | JIS C5201 4.8 | 1Ω≦R≦10Ω：±200 PPM/℃<br>10Ω<R≦1MΩ：±100 PPM/℃ |
| 焊锡性<br>Solderability | JIS C5201 4.17 | 最少95%面积上锡 Min 95% coverage |
| 绝缘电阻<br>Insulation Resistance | JIS C5201 4.6 | > 10GΩ |
| 绝缘耐压<br>Dielectric Withstanding Voltage | JIS C5201 4.7 | 无击穿、飞弧及可见机械性损伤<br>No evidence of flashover,mechanical damage arcing or insulation breakdown |
| 短时间过负荷<br>Short-Time Overload | JIS C5201 4.13 | ±(1.0%+0.0.05Ω)Max(最大) |
| 端子弯曲<br>Terminal Bending | JIS C5201 4.33 | ±(1.0%+0.0.05Ω)Max(最大) |
| 抗焊锡热<br>Resist to Soldering Heat | JIS C5201 4.18 | ±(1.0%+0.05Ω)Max(最大) |
| 负荷寿命<br>Load Life | JIS C5201 4.25.1 | ±(2.0%+0.05Ω)Max(最大) |
| 耐湿特性<br>Humidity | JIS C5201 4.24 | ±(2.0%+0.05Ω)Max(最大) |
| 温度循环<br>Temperature Cycling | JIS C5201 4.19 | ±(2.0%+0.05Ω)Max(最大) |
| 温湿循环<br>Moisture Resistance | MIL-STD-202<br>METHOD106 | ±(2.0%+0.05Ω)Max(最大) |

DGPHNST 華平 电话：0755-28173910

## 特性 Features

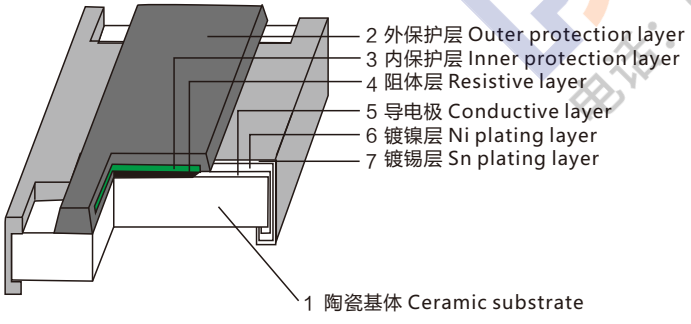
适合贴片机组装 Suitable for SMT
符合RoHS和无卤标准 Meet RoHS & HF Requirement
宽电极Wide Terminal
符合AEC-Q200标准 Comply with AEC-Q200 standard
优越的抗硫化特性 Superior resistance against sulfur containing atmosphere

## 应用 Application

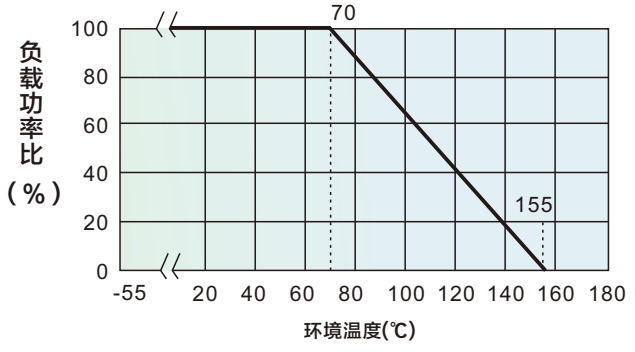
汽车电子 Automotive electronics
电信设备 Telecommunications equipment
电源电压控制 Voltage control in power supplies
测试和测量设备 Test & Measurment equipment
医疗设备 Medical Equipment
户外电子应用 Outdoor Electronic Applications

DGPHNST 華平 电话：0755-23173910

## 构造 Construction




## 功率衰减曲线 Power Derating Curve




## 订货方式（例如1225 1% 2W 20Ω）
## Ordering Procedure（Example 1225 1% 2W 20Ω）
## 料号（Part Number）：AW1225FB20R0G

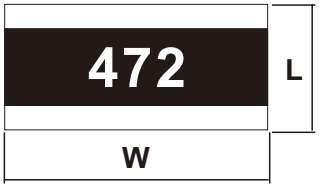
| AW | 1225 | F | B | 20R0 | G |
|---|---|---|---|---|---|
| 类型（Type）<br>AW: 抗硫车用宽电极厚膜贴片电阻 (Anti-Sulfuration wide Terminal thick film chip resistors) | 尺寸（Size）<br>0612<br>1020<br>1225 | 公差<br>Tolerance<br>F=±1%<br>J=±5% | 额定功率<br>Rated Power<br>1= 1W<br>2=3/4W<br>B= 2W | 阻值<br>Resistance Value<br>±1%：<br>20R0=20Ω<br>49R9=49.9Ω<br>1002=10KΩ<br>±5%：<br>06R8=6.8Ω<br>0200=20Ω<br>0564=560KΩ | 包装代码<br>Packing Code<br>G= reel（卷装）<br>V= bulk（散料）<br>S= Double Standard Quantity (两倍卷盘标准包装量) |

## 特性 Characteristics

| 类型 Type | AW0612 | AW1020 | AW1225 |
|---|---|---|---|
| 额定功率 70℃Rated Power at 70℃ | 3/4W | 1W | 2W |
| 最大工作电压 Max Working Voltage | 200V | 200V | 200V |
| 最大过负荷电压 Max Overload Voltage | 400V | 400V | 400V |
| 绝缘耐压 WithStanding Voltage Dielectric | 570V | 710V | 710V |
| 操作温度范围 Operating Temperature | -55~+155℃ | -55~+155℃ | -55~+155℃ |
| 零欧姆阻值 Resistance Value of Jumper | <50mΩ | <50mΩ | <50mΩ |
| 零欧姆额定电流 Rated Current of Jumper | 2.0A | 2.0A | 2.0A |
| 零欧姆电阻最大电流 Max Current of Jumper | 10.0A | 10.0A | 10.0A |
| 1%阻值范围 Resistance Range of 1% | 1Ω-1MΩ | 1Ω-1MΩ | 1Ω-1MΩ |
| 5%阻值范围 Resistance Range of 5% | 1Ω-1MΩ | 1Ω-1MΩ | 1Ω-1MΩ |

DGPHNST 華年
电话：0755-23173910

## 外形尺寸 Dimension



| 类型 Type | | RW0612 | RW1020 | RW1225 |
|---|---|---|---|---|
| 尺寸 Dimension | L(mm) | 1.60±0.15 | 2.50±0.15 | 3.10±0.15 |
| | W(mm) | 3.20±0.20 | 5.00±0.15 | 6.30±0.15 |
| | T(mm) | 0.60±0.10 | 0.60±0.10 | 0.60±0.10 |
| | E(mm) | 0.30±0.20 | 0.40±0.20 | 0.45±0.20 |
| | e(mm) | 0.45±0.15 | 0.75±0.15 | 0.75±0.15 |

## 标准包装数量 Standard Packing Quantity

0612：5,000Pcs Per Reel(每卷5,000Pcs)

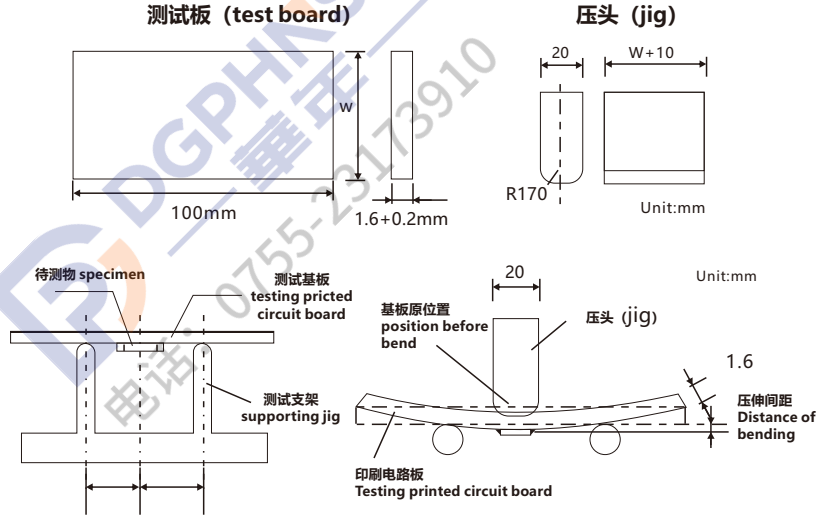
1020/1218/1225：4,000Pcs Per Reel(每卷4,000Pcs)

## 性能 Performance Specifications

| 内容 Item | 测试方法 Test Methods | 规格 Specification Limits |
|---|---|---|
| 温度系数<br>Temperature Coefficient | JIS C5201 4.8 | 1Ω≦R≦10Ω：±200 PPM/℃<br>10Ω<R≦1MΩ：±100 PPM/℃ |
| 焊锡性<br>Solderability | J-STD-002 | 最少95%面积上锡 Min 95% coverage |
| 绝缘电阻<br>Insulation Resistance | JIS C5201 4.6 | > 10GΩ |
| 绝缘耐压<br>Dielectric Withstanding Voltage | JIS C5201 4.7 | 无击穿、飞弧及可见机械性损伤<br>No evidence of flashover,mechanical damage arcing or insulation breakdown |
| 短时间过负荷<br>Short-Time Overload | JIS C5201 4.13 | ±(1.0%+0.0.05Ω)Max(最大) |
| 端子弯曲<br>Terminal Bending | AEC-Q200-005 | ±(1.0%+0.0.05Ω)Max(最大) |
| 抗焊锡热<br>Resist to Soldering Heat | MIL-STD-202<br>METHOD 210 | ±(1.0%+0.05Ω)Max(最大) |
| 负荷寿命<br>Load Life | MIL-STD-202<br>METHOD 108 | ±(2.0%+0.05Ω)Max(最大) |
| 耐湿特性<br>Humidity | MIL-STD-202<br>METHOD 103 | ±(2.0%+0.05Ω)Max(最大) |
| 温度循环<br>Temperature Cycling | JESD22 METHOD<br>JA-104 | ±(2.0%+0.05Ω)Max(最大) |
| 温湿循环<br>Moisture Resistance | MIL-STD-202<br>METHOD106 | ±(2.0%+0.05Ω)Max(最大) |
| 高温储存<br>High Temperature Exposure(Storage) | MIL-STD-202<br>METHOD108 | ±(1.0%+0.05Ω)Max(最大) |
| ESD试验<br>ESD test | AEC-Q200-002 | ±(3.0%+0.05Ω)Max(最大) |
| 抗硫化試驗<br>Sulfuration test | ASTM-B-809-95 | ±(3.0%+0.05Ω)Max(最大) |

DGPHNST 电话：0755-23173990

| 内容 Item | 测试条件 Test Conditions |
|---|---|
| 温度系数<br>Temperature Coefficient | JIS C5201 4.8<br>TCR=（R-$R_0$）/（t-t0）$R_0$ ×$10^6$（ppm）<br>$R_0$ 电阻在室温下的阻值(resistance at room temperature)<br>R 电阻在125℃或-55℃下的阻值(resistance at 125℃ or -55℃)<br>$t_0$室温(room temperature)<br>t 测试温度（test temperature 125℃ or -55℃） |
| 焊锡性<br>Solderability | JIS C 5201 4.17<br>沾助焊剂后浸入锡炉，锡炉温度245±5℃，时间3±0.5秒。<br>Dip the terminal in a flux and then dip into a soldering bath at 245±5℃ for 3±0.5sec. |
| | J-STD-002<br>用于引脚型和表面贴装型元件，不需要电气测试. 放大倍数50倍。<br>测试条件:<br>表面贴装型:<br>a)方法B, 干热@155℃,4小时,@235℃,3±0.5秒<br>b)方法B, 蒸煮8小时, @235℃,3±0.5秒<br>For pin and surface-mount components, no electrical testing required.<br>Magnification 50 times. Test conditions:<br>Surface mount type:<br>a) Method B: dry heat @155℃,4 hours,<br>@235℃,3±0.5 seconds<br>b) Method B: cook for 8 hours at @235℃,3±0.5 seconds |
| 绝缘电阻<br>Insulation resistance | JIS C 5201 4.6<br>电阻本体上加载绝缘耐压60±5秒后，测量绝缘阻抗<br>Applied the dielectric withstanding voltage on the center of body for 60±5seconds. Then measure insulation resistance |
| 绝缘耐压<br>Dielectric withstanding voltage | JIS C 5201 4.7<br>电阻本体上加载绝缘耐压60±5秒。<br>Applied the dielectric withstanding voltage on the center of body for60±5seconds. |
| 短时间过负荷<br>Short-time overload | JIS C 5201 4.13<br>加载2.5倍的额定电压，时间5秒后测量试验前后的阻值变化率。<br>Applied 2.5 times of rated voltage for 5 second. Measure the variation of resistance.<br>$\triangle R\% = \frac{R_2-R_1}{R_1} * 100----(\%)$<br>R1=试验前阻值(resistance before test)<br>R2 = 试验后阻值(resistance after test) |
| 抗焊锡热<br>Resist to soldering heat | JIS C 5201 4.18<br>沾助焊剂后浸入锡炉，锡炉温度260±5℃，时间10±0.5秒, 测量试验前后的阻值变化率。<br>Dip the terminal in a flux and then dip into a soldering bath at 260±5℃ for 10±0.5sec. Measure the variation of resistance.<br>$\triangle R\% = \frac{R_2-R_1}{R_1} * 100----(\%)$<br>R1 =试验前阻值(resistance before test)<br>R2 =试验后阻值(resistance after test) |
| | MIL-STD-202 METHOD 210<br>锡炉温度260±5℃,时间10±0.5秒，样品不进行预热。注意:单一波峰焊-表面贴装元件按程序，浸入器件本体的1.5mm的深度.<br>Soldering bath at 260±5℃ for 10±0.5sec. No pre-heat of samples. Note: Single Wave Solder-Procedure 2 for SMD and Procedure 1 for Leaded with solder within 1.5mm of device body.<br>$\triangle R\% = \frac{R_2-R_1}{R_1} * 100----(\%)$<br>R1 =试验前阻值(resistance before test)<br>R2 =试验后阻值(resistance after test) |

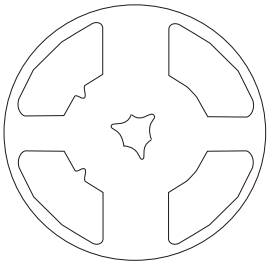
| 内容 Item | 测试条件 Test Conditions |
|---|---|
| 端子弯曲<br>Terminal bending | JIS C 5201 4.33<br>电阻焊接在测试板上进行弯折,弯折保持时间20±1秒，1206(含) 以下的尺寸弯曲5+0.2/0 mm; 1206以上的尺寸弯曲2+0.2/0 mm; 量测试验前后阻值变化率<br>Specimen shall be mounted on test board, then bend the board and maintained for 20±1s. the distance of bending is 5+0.2/0 mm for resistors which size no larger than 1206 or 2+0.2/0 mm which size larger than 1206. Measure the variation of resistance.<br>  <br><br>$\triangle R\% = \frac{R_2-R_1}{R_1} *100----(\%)$<br>R1=试验前阻值(resistance before test)<br>R2=试验后阻值(resistance after test) |
| 端子弯曲<br>Board Flex | AEC-Q200-005<br>焊接在PCB板上，0201～1206弯板深度5mm，1210以上弯板深度2mm；保持60±1s<br>Reflow solder the samples on PCB，0201 ~ 1206 bending plate depth 5mm, 1210 above bending plate depth 2mm;Keep 60±1 s<br>$\triangle R\% = \frac{R_2-R_1}{R_1} *100----(\%)$<br>R1=试验前阻值(resistance before test)<br>R2=试验后阻值(resistance after test) |

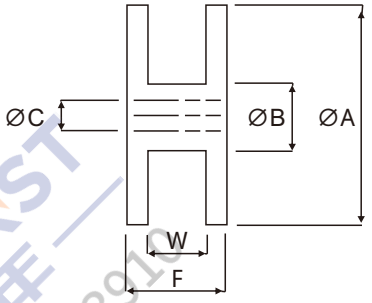
| 内容 Item | 测试条件 Test Conditions |
|---|---|
| 温度循环<br>Temperature cycling | JIS C 5201 4.19<br>电阻放入温度循环机中，温度155±2℃至-55±3℃，共5个循环。<br>量测试验前后阻值变化率.<br>Put specimen in a chamber which temperature can be changed to 155±2℃ or -55±3℃, repeated 5 times. Measure the variation of resistance.<br>$\triangle R\% = \frac{R_2-R_1}{R_1} *100----(\%)$<br>R1=试验前阻值(resistance before test)<br>R2=试验后阻值(resistance after test) |
| | JESD22 METHOD JA-104<br>-55℃~+ 155℃, 循环1000次，在每一个极限温度持续时间不超过30分钟，且温度转换时间不超过1分钟，试验结束24±4小时后进行测试.<br>1000 Cycles (-55℃ to +155℃) Measurement at 24±4 hours after test conclusion. 30min maximum dwell time at each temperature extreme. 1min. maximum transition time.<br>$\triangle R\% = \frac{R_2-R_1}{R_1} *100----(\%)$<br>R1=试验前阻值(resistance before test)<br>R2=试验后阻值(resistance after test) |
| 温湿循环<br>Moisture resistance | MIL-STD-202 METHOD 106<br>25°C~65°C,90~100%RH, 2.5小时; 65°C 90~100%RH, 3小时;<br>65°C~25°C,80~100%RH,2.5小时,10个循环,试验结束24±4小时后进行测试.<br>25°C~65°C,90~100%RH, 2.5H; 65°C 90~100%RH, 3H; 65°C~25°C<br>80~100%RH, 2.5H, 10 cycles, Measurement at 24±4 hours after test conclusion.<br>$\triangle R\% = \frac{R_2-R_1}{R_1} *100----(\%)$<br>R1=试验前阻值(resistance before test)<br>R2=试验后阻值(resistance after test) |
| 负荷寿命<br>Load life | JIS C 5201 4.25.1<br>电阻放入恒温箱中，温度70±2℃，ON TIME:1.5H，OFF TIME:0.5H，通电额定电压1000 $^{+24}/_{-0}$小时，量测试验前后阻值变化率.<br>Put the specimen in a chamber at 70±2℃ temperature, ON TIME:1.5H，OFF TIME:0.5H，and applied rated voltage for 1000 $^{+24}/_{-0}$H. Measure the variation of resistance.<br>$\triangle R\% = \frac{R_2-R_1}{R_1} *100----(\%)$<br>R1=试验前阻值(resistance before test)<br>R2=试验后阻值(resistance after test) |
| 负荷寿命<br>Operational life | MIL-STD-202 METHOD 108<br>恒定温度125℃加载额定功率，ON TIME:1.5H，OFF TIME:0.5H，额定电压1000 $^{+24}/_{-0}$小时<br>Load rated power, ON TIME:1.5H, OFF TIME:0.5H, rated voltage 1000 $^{+24}/_{-0}$ hours<br>$\triangle R\% = \frac{R_2-R_1}{R_1} *100----(\%)$<br>R1=试验前阻值(resistance before test)<br>R2=试验后阻值(resistance after test) |
| 耐湿特性<br>Humidity | JIS C 5201 4.24<br>电阻放入恒温恒湿箱，温度40±2℃，湿度90~95 %RH;通电额定电压1.5小时，断电0.5小时;重复通断电至试验时间1000 +48/-0 小时. 量测试验前后阻值变化率.<br>Put the specimen in a chamber at 40±2℃ temperature and 90~95% relative humidity, then applied rated voltage for1.5H and rested for 0.5H repeatedly till total test time is 1000 +48/-0 .. Measure the variation of resistance.<br>$\triangle R\% = \frac{R_2-R_1}{R_1} *100----(\%)$<br>R1=试验前阻值(resistance before test)<br>R2=试验后阻值(resistance after test) |

| 内容 Item | 测试条件 Test Conditions |
|---|---|
| 耐湿特性<br>Biased Humidity | MIL-STD-202 METHOD 103<br>加载10%额定功率，85℃/85%RH,<br>持续通电1000H,试验结束24±4小时后进行测试<br>1000 hours 85℃/85%RH.<br>Note: Specified conditions: 10% of operating power. Measurement at 24±4 hours after test conclusion.<br>$\triangle R\% = \frac{R_2-R_1}{R_1} *100----(\%)$<br>R1=试验前阻值(resistance before test)<br>R2=试验后阻值(resistance after test) |
| 高温储存<br>High Temperature Exposure (Storage) | MIL-STD-202 METHOD 108<br>155℃下放置1000h,不加载功率，试验结束24±4小时后进行测试.<br>1000 hrs. @ T=155℃. Unpowered. Measurement at 24±4 hours after test conclusion<br>$\triangle R\% = \frac{R_2-R_1}{R_1} *100----(\%)$<br>R1=试验前阻值(resistance before test)<br>R2=试验后阻值(resistance after test) |
| ESD试验<br>ESD test | AEC-Q200-002<br>加载规定静电电压2次/间隔1秒，<br>0201/0402规格：0.5KV, 0603规格：1KV, 其它规格2KV:<br>0201/0402：0.5KV, 0603：1.0KV, Other：2KV, 2times/1s<br>$\triangle R\% = \frac{R_2-R_1}{R_1} *100----(\%)$<br>R1=试验前阻值(resistance before test)<br>R2=试验后阻值(resistance after test) |
| 抗硫化試驗<br>Sulfurstion test | ASTM-B-809-95<br>汽车电阻:<br>方法一：温度60℃，湿热蒸硫粉试验（加饱和硝酸钾）750hrs<br>方法二：切削油:硫粉=96.5:3.5，温度60℃，100 hrs;<br>预处理：前后先经历3次回流焊+100次温冲<br>Method 1: steam sulfur powder test (with saturated potassium nitrate) at 60℃ with humidity and heat (750hrs)<br>Method 2: cutting oil: sulfur powder =96.5:3.5, temperature 60℃, 100 hrs;<br>Pretreatment: before and after three reflow soldering +100 thermal shock<br>$\triangle R\% = \frac{R_2-R_1}{R_1} *100----(\%)$<br>R1=试验前阻值(resistance before test)<br>R2=试验后阻值(resistance after test)<br>抗硫化电阻:<br>方法一：温度105℃，湿热蒸硫粉试验（加饱和硝酸钾）750hrs<br>方法二：切削油:硫粉=96.5:3.5，温度105℃，100H;<br>预处理：前后先经历3次回流焊+100次温冲<br>Method 1: steam sulfur powder test (with saturated potassium nitrate) at 105℃ with humidity and heat (750hrs)<br>Method 2: cutting oil: sulfur powder =96.5:3.5, temperature 105℃, 100H;<br>Pretreatment: before and after three reflow soldering +100 thermal shock<br>$\triangle R\% = \frac{R_2-R_1}{R_1} *100----(\%)$<br>R1=试验前阻值(resistance before test)<br>R2=试验后阻值(resistance after test) |
| 脉冲<br>Pulse | IEC 60115-1 4.27<br>按照脉冲功率曲线加载脉冲功率1次，测试验前后阻值变化率.<br>Load pulse power 1 time according to Curve of pulse duration.<br>Measure the variation of resistance.<br>$\triangle R\% = \frac{R_2-R_1}{R_1} *100----(\%)$<br>R1=试验前阻值(resistance before test)<br>R2=试验后阻值(resistance after test) |

## 包装规格（Tapping Specification）

**Reel**






Standard Quantity per Reel
5,000 pcs/Reel

| 尺寸 Dimensions | | A | B | C | F | W |
|---|---|---|---|---|---|---|
| 1005<br>0201<br>0402<br>0603<br>0805<br>1206<br>1210<br>0204<br>0306<br>0508<br>0612 | mm | 178±2.0 | 60.0±1.0 | 13.5±0.5 | 11.4±0.1 | 9.00±0.03 |
| | Inch | 7.008±0.079 | 2.362±0.039 | 0.531±0.020 | 0.449±0.039 | 0.354±0.012 |
| 1812<br>2010<br>2512<br>1020<br>1225 | mm | 178±2.0 | 60.0±1.0 | 13.5±0.5 | 15.4±1.0 | 13.0±0.3 |
| | Inch | 7.008±0.079 | 2.362±0.039 | 0.531±0.020 | 0.606±0.039 | 0.512±0.012 |

**备注（Remark）：**

(1)01005 每卷20,000pcs（01005为1005规格尺寸）
01005 Quantity per Reel 20,000pcs/Reel（01005 is 1005 size）
(2)0201/0402/CA024A 每卷10,000pcs
0201/0402 Quantity per Reel 10,000pcs/Reel
(3)1812/2010/2512 每卷4,000pcs
1812/2010/2512 Quantity per Reel 4,000pcs/Reel
(4)0603/0805/1206/1210/CA034A 每卷5,000pcs
0603/0805/1206/1210 Quantity per Reel 5,000pcs/Reel
(5)0402可依客户要求 每卷20,000pcs
0402 Quantity per Reel 20,000pcs/Reelas customer requirement

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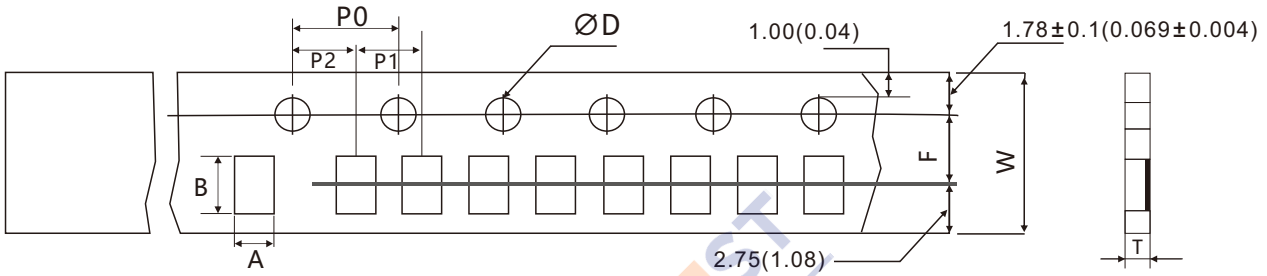
# 贴片电阻包装规格 Chip Resistor Tapping Specification




单位毫米 Unit:mm

| Dimension | A | B | D | F | P0 | P1 | P2 | W | T |
|---|---|---|---|---|---|---|---|---|---|
| 01005 | 0.24±0.05 | 0.45±0.05 | $1.5^{+0.1}_{0.0}$ | 3.50±0.05 | 4.00±0.10 | 2.00±0.05 | 2.00±0.05 | 8.00±0.20 | 0.40±0.07 |
| 0201 | 0.38±0.05 | 0.68±0.05 | $1.5^{+0.1}_{0.0}$ | 3.50±0.05 | 4.00±0.10 | 2.00±0.10 | 2.00±0.05 | 8.00±0.20 | 0.42±0.07 |
| 0402<br>0204 | 0.65±0.10 | 1.15±0.10 | $1.5^{+0.1}_{0.0}$ | 3.50±0.05 | 4.00±0.10 | 2.00±0.10 | 2.00±0.05 | 8.00±0.20 | 0.42±0.07 |
| 0603<br>0306 | 1.10±0.10 | 1.90±0.10 | $1.5^{+0.1}_{0.0}$ | 3.50±0.05 | 4.00±0.10 | 4.00±0.10 | 2.00±0.05 | 8.00±0.20 | 0.60±0.07 |
| 0805<br>0508 | 1.65±0.20 | 2.40±0.20 | $1.5^{+0.1}_{0.0}$ | 3.50±0.05 | 4.00±0.10 | 4.00±0.10 | 2.00±0.05 | 8.00±0.20 | 0.75±0.07 |
| 1206<br>0612 | 2.00±0.20 | 3.60±0.20 | $1.5^{+0.1}_{0.0}$ | 3.50±0.05 | 4.00±0.10 | 4.00±0.10 | 2.00±0.05 | 8.00±0.20 | 0.75±0.07 |
| RM1206 | 2.0±0.15 | 3.6±0.20 | $1.5^{+0.1}_{0.0}$ | 3.50±0.05 | 4.00±0.10 | 4.00±0.10 | 2.00±0.05 | 8.00±0.20 | 0.84±0.10 |
| 1210 | 2.80±0.20 | 3.50±0.20 | $1.5^{+0.1}_{0.0}$ | 3.50±0.05 | 4.00±0.10 | 4.00±0.10 | 2.00±0.05 | 8.00±0.20 | 0.75±0.07 |
| 1812 | 3.30±0.20 | 4.60±0.20 | $1.5^{+0.1}_{0.0}$ | 5.50±0.05 | 4.00±0.10 | 4.00±0.10 | 2.00±0.05 | 12.0±0.10 | 1.0±0.07 |
| 2010<br>1020 | 2.90±0.10 | 5.30±0.10 | $1.5^{+0.1}_{0.0}$ | 5.50±0.05 | 4.00±0.10 | 4.00±0.10 | 2.00±0.05 | 12.0±0.10 | 1.0±0.07 |
| 2512<br>1225 | 3.40±0.10 | 6.60±0.10 | $1.5^{+0.1}_{0.0}$ | 5.50±0.05 | 4.00±0.10 | 4.00±0.10 | 2.00±0.05 | 12.0±0.10 | 1.0±0.07 |
| RM2512 | 3.60+0.2<br>/-0.18 | 6.90±0.20 | $1.5^{+0.1}_{0.0}$ | 5.50±0.05 | 4.00±0.10 | 4.00±0.10 | 2.00±0.05 | 12.0±0.20 | 1.0±0.15 |

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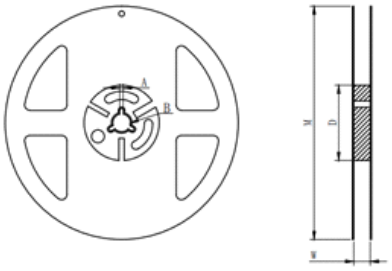
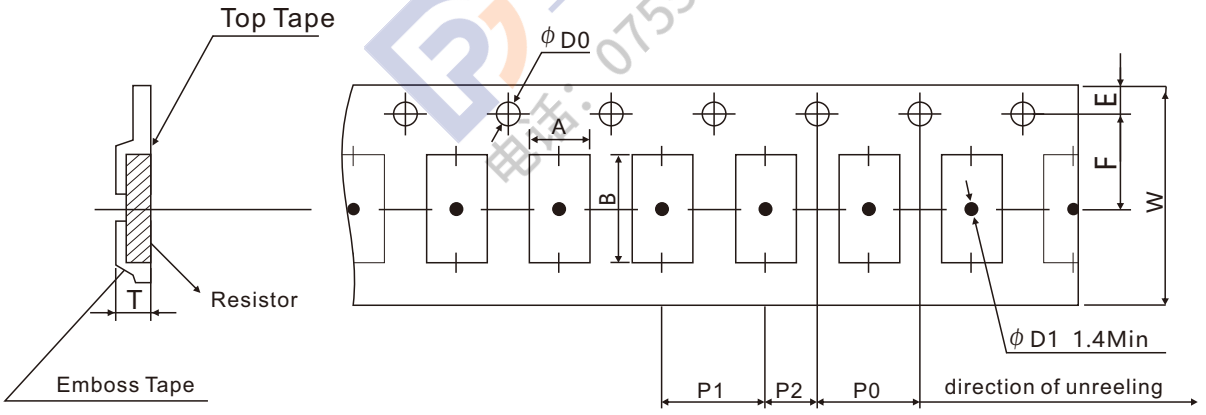


| Reel Type | W | M | A | B | D |
|---|---|---|---|---|---|
| RZ2512 for 16mm tape | 17.0±1.0 | 330±2.0 | 2.0±0.5 | 13.5±0.5 | 60.0±1.0 |
| RZ3920 for 24mm tape | 25.0±1.0 | 330±2.0 | 2.0±0.5 | 13.5±0.5 | 60.0±1.0 |
| RZ5930 for 32mm tape | 33.0±1.0 | 330±2.0 | 2.0±0.5 | 13.5±0.5 | 60.0±1.0 |




| Type | A | B | W | E | F | P0 | P1 | P2 | ¢ D0 | T | Quantity (PCS) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| RZ2512 | 3.5±0.1 | 6.8±0.1 | 16±0.2 | 1.75±0.1 | 5.5±0.1 | 4.0±0.1 | 8.0±0.1 | 2.0±0.1 | 1.5±0.1 | 1.8±0.2 | 4000 |
| RZ3920 | 5.7±0.1 | 11.2±0.1 | 24±0.2 | 1.75±0.1 | 7.5±0.1 | 12±0.1 | 12±0.1 | 6.0±0.1 | 1.5±0.1 | 2.5±0.2 | 2000 |
| RZ5930 | 8.2±0.1 | 16.1±0.1 | 32±0.2 | 1.75±0.1 | 11.5±0.1 | 12±0.1 | 12±0.1 | 6.0±0.1 | 1.5±0.1 | 2.5±0.2 | 2000 |

DGPHYST 華年 电话：0755-23173910

## 特性 Features

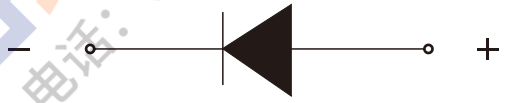
1.表面贴装组件，适合应用于表面自动贴装应用.
Surface Mounted Device(SMD),Suitable for Auto-placement Surface Mounting Application
2.电极表面为电镀锡，适合波峰焊和回流焊.
Matte Tin Plating Temination Layer for Reflow & Wave Soldering
3.产品基材为氧化铝陶瓷基板，具有抗高热量及机械应力的能力
Aluminum Oxide Ceramic Substrate as Body,High Thermal and Mechanical Resist

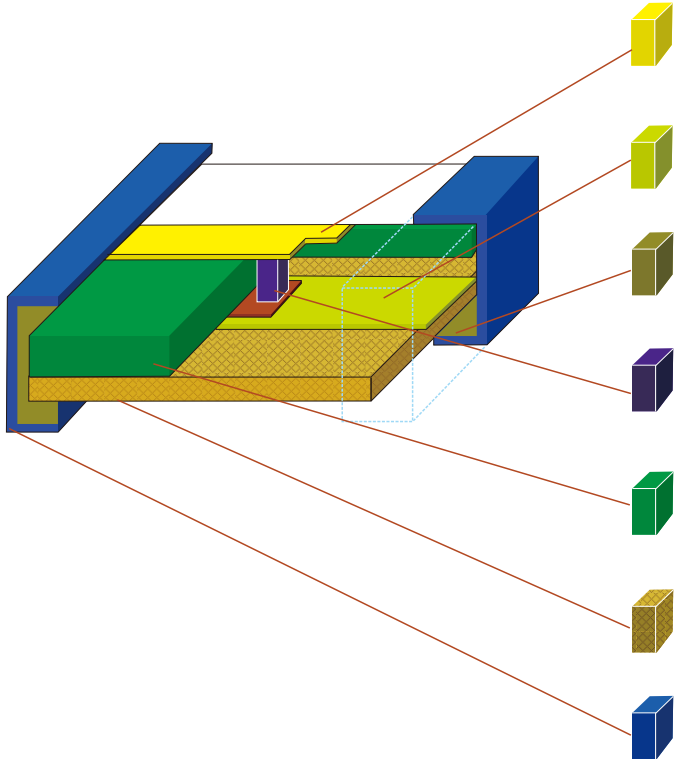
## 应用 Application

1.快速切换Fast Switching
2.适合各种电子电路板For General Purpose on Electronics Circuit Board

## 标识 Marking

标识为负电极Marking as Cathode Terminal



银膏 Silver Paste

导体膏 Conduct Paste

溅镀 Sputtering

晶粒 Dice

封盖膏 Liquid Encapsulant

陶瓷 Base Material

电镀 Plating Layer

DGPINST 肇年 电话：0755-23173910

## 产品尺寸 Product Size

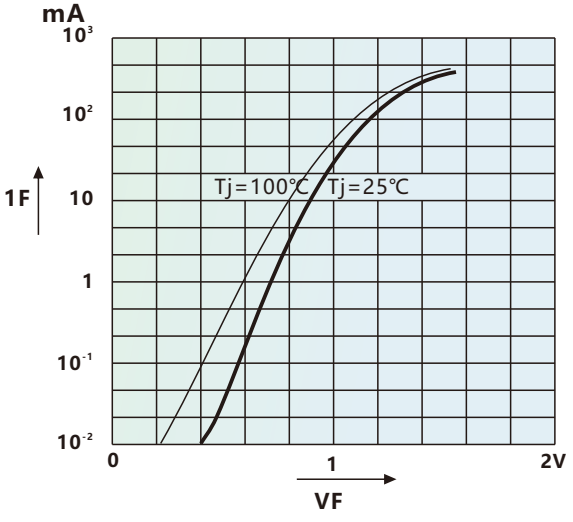
单位Unit:mm

| 系列Series | CD4148WP(1206) | CD4148WSP(0805) | CD4148WTP(0603) |
|---|---|---|---|
| 长L | 3.20±0.20 | 2.00±0.20 | 1.55±0.10 |
| 宽W | 1.50±0.20 | 1.25±0.20 | 0.80±0.10 |
| 高T | 0.75±0.10 | 0.75±0.10 | 0.65±0.10 |
| 背导长C | 0.55±0.20 | 0.45±0.20 | 0.35±0.10 |

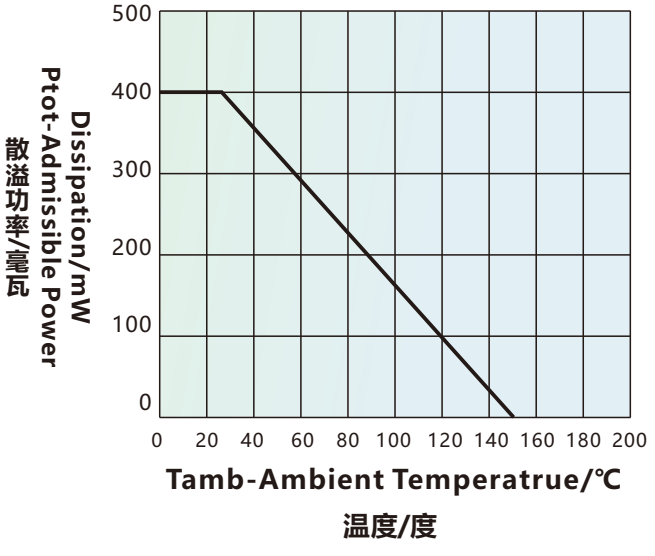
DGPHNST 華年 电话：0755-23173910

## 特性曲线 Characterisric Curve

正向特性Figuer 1.Forward characteristic




功率衰减Flgure 2.Power De-rating



## 电气特性，温度=25℃ Electrical Characteristice, Tamb=25℃

| 系列 Series | | CD4148WP | CD4148WSP | CD4148WTP | CD4148WN | CD4148WSN | CD4148WTN |
|---|---|---|---|---|---|---|---|
| 尺寸代码（英寸/毫米）Size Code(Inch/mm) | | 1206 (3216) | 0805 (2012) | 0603 (1608) | 1206 (3216) | 0805 (2012) | 0603 (1608) |
| 操作温度 Operating Temperature | | -55 ~ +150℃ | | | | | |
| 散溢温度 Powr Dissipation | Ptot | 400mW | 200mW | 200mW | 500mW | 200mW | 200mW |
| 可重复反向峰值电压 Repetitve Peak Revers Voltage | VRRM | 75V | 75V | 75V | 100V | 100V | 90V |
| 重复恢复电流 Repetivive Peak Forward Current | IFRM | 300mA | 300mA | 225mA | 300mA | 300mA | 225mA |
| 非重复正向电流 Non-repetitive Surge Forward Current,at t < 1s | IFSM | 500mAMax | 500mAMax | 400mAMax | 500mAMax | 500mAMax | 400mAMax |
| 平均整流电流 Average Rectified Current,at f > =50Hz | IF(AV) | 150mAMax | 150mAMax | 100mAMax | 150mAMax | 150mAMax | 100mAMax |
| 顺向电压 Forward Voltage,at 10mA | VF | 1.0V Max | 1.0V Max | 1.0V Max | 1.0V Max | 1.0V Max | 1.0V Max |
| 漏电流 Leakage Current,at 20V | IR | 25nA Max | 25nA Max | 25nA Max | 25nA Max | 25nA Max | 25nA Max |
| 漏电流 Leakage Current,at 75V | | 5uA Max | 5uA Max | 5uA Max | | | |
| 漏电流 Leakage Current,at 80V | | | | | 0.5uA Max | 0.5uA Max | 0.1uA Max |
| 电容Capacitance,at VF=VR=0V | Ctot | 4pF Max | 4pF Max | 4pF Max | 4pF Max | 4pF Max | 3pF Max |
| 反向恢复时间Reverse Recovery Time,at IF=10mA&IR=1mA | Trr | 4ns Max | 4ns Max | 4ns Max | 4ns Max | 4ns Max | 4ns Max |

DGPHNST 華平 电话：0755-23173910

## 特性测试 Test Characteristice

| 测试项目 Test Item | 测试条件 Test Condition | 规格 Requierment |
|---|---|---|
| 可焊性<br>Solderability | 245±5℃,2±0.5秒锡炉浸锡<br>Sn bath at 245±5℃ for 2±0.5s | 焊锡面积＞95%<br>＞95% area tin covered |
| 焊接耐热<br>Resistance To Soldering Heat | 没有物理破损，电性在规格内<br>Sn bath at 260±5℃ for 10±2s<br>260±5℃，10±1秒 | $V_{F1}$ $V_R$ & $I_R$ 电性在规格内，外观没有破损<br>$V_{F1}$ $V_R$ & $I_R$ within spec; no mechanical damage |
| 高温高湿<br>Humidity Steady State | 85±5℃ 85%RH 条件下保持168小时.<br>At85±5℃ 85%RH for 168hrs | $V_{F1}$ $V_R$ & $I_R$电性在规格内<br>$V_{F1}$ $V_R$ & $I_R$ Within Spec |
| 连续顺向负荷寿命<br>Continue Forward Operating Life | IF=1.1*IO(165mA),保持1000小时.电性在规格内<br>At 25℃ IF=1.1IF for 1000hrs | $V_{F1}$ $V_R$ & $I_R$电性在规格内<br>$V_{F1}$ $V_R$ & $I_R$ Within Spec |
| 冷热冲击<br>Thermal Shock | -55±3℃/5分钟→150±3℃/5分钟；10循环.电性在规格内<br>-55±5℃/5min to 150±5℃/5min for 10cycles | $V_{F1}$ $V_R$ & $I_R$电性在规格内<br>$V_{F1}$ $V_R$ & $I_R$ Within Spec |
| 弯折<br>Bending Strength | 弯曲2mm.外观没有破损，电性在规格<br>Bending up to 2mm for icycle | $V_{F1}$ $V_R$ & $I_R$电性在规格内，外观没有破损<br>$V_{F1}$ $V_R$ & $I_R$ Within Spec; no mechanical damage |

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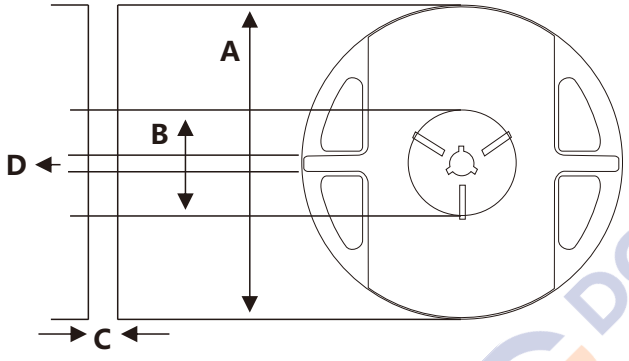
## 包装 Packing

组件的纸带及卷盘的规格如"IEC 60286-3自动封装处理
Components tape and reel specifications are referring to "IEC 60286-3 Packaging of components for automatic handling

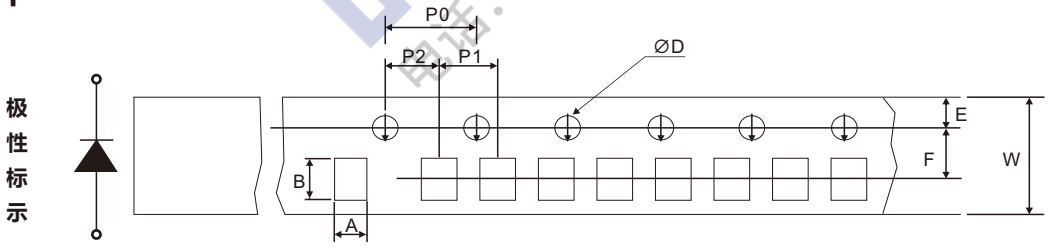
## 卷盘尺寸 Reel Dimensions




单位毫米 Unit:mm

| 项目 Item | 尺寸Dimension |
|---|---|
| A | 178.0±1.0 |
| B | 60.0±1.0 |
| C | 9.5±0.3 |
| D | 13.0±0.3 |

## 纸带尺寸 Tape Dimensions




单位毫米 Unit:mm

| 尺寸 Dimension | 1206 | 0805 | 0603 |
|---|---|---|---|
| A | 2.00±0.20 | 1.65±0.20 | 1.10±0.10 |
| B | 3.60±0.20 | 2.40±0.20 | 1.90±0.10 |
| W | 8.00±0.20 | 8.00±0.20 | 8.00±0.20 |
| D | 1.50±0.10 | 1.50±0.10 | 1.50±0.10 |
| E | 1.75±0.10 | 1.75±0.10 | 1.75±0.10 |
| F | 3.50±0.10 | 3.50±0.10 | 3.50±0.10 |
| P0 | 4.00±0.10 | 4.00±0.10 | 4.00±0.10 |
| P1 | 4.00±0.10 | 4.00±0.10 | 4.00±0.10 |
| P2 | 2.00±0.05 | 2.00±0.05 | 2.00±0.05 |

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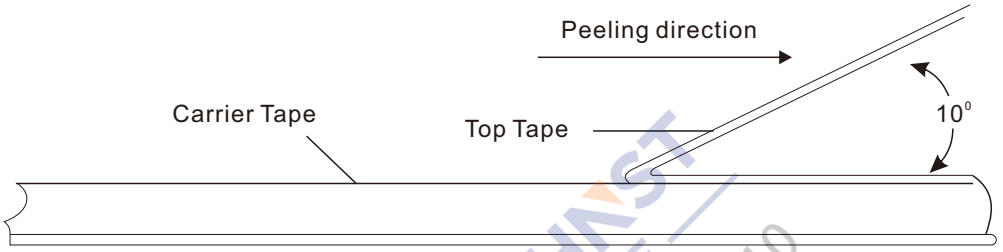
## 上胶带剥离 Top Tape Peeling

**上胶带剥离角度在165°~180°之间，从载体上剥离角度如下图所示**
**The top tape peeling-off angle from carrier tape is within 165℃~180℃ during application**




## 订货方式 Ordering Procedure

**订货方式(例如 芯片开关二极管4148 1206 75V Lead Free)**
**Ordering Procedure（Example Chip Switching Diode 4148 1206 75V)**
**料号（Part Number):CD4148WP**

| CD | 4148 | W | P |
|---|---|---|---|
| 产品系列 Product Series<br>CD:贴片二极管<br>Chip Diode | 产品类别Product Type<br>4148:75V<br>4448:75V(IF=100mA)<br>BAV21：高压200V<br>(High voltage 200V) | 尺寸Size<br>WQ:0402<br>WT:0603<br>WS:0805<br>W :1206 | 特别码Special Code<br>P:无铅Lead-free<br>N:反向电压100V<br>VRRM 100V |

## 卷装数量 Reel Quantity

每卷5,000PCS/5,000PCS Per Reel

## 储存条件 Storage Condition

由于高温和潮湿或化学环境，产品终端的可焊性会降低.环境温度需在40℃以下，环境相对湿度需小于75%，远离化学物
Product termination solderability can degrade due to high temperature and humidity or chemical envionment.
Storage condition must be in an ambient temperature of ＜40℃ and ambient humidity of ＜75%RH,and free from chemical.

## 免责声明 Disclaimers

以下情况应避免使用这些产品：故障可能造成人身伤亡，严重的财产或环境损害，如医疗，军事，航空，太空或生命支持设备损坏等
These products are not designed for use in applications where any failure or malfuncioon may resulted inpersonal injury, death or severe property or environmental damage such as medical, military, aircraft, space or life support equipments.

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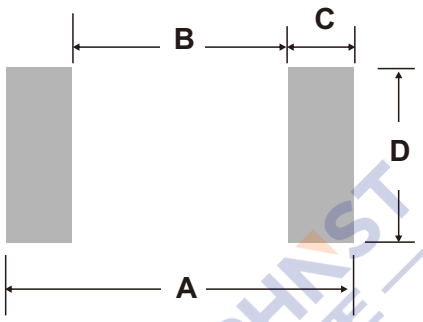
## 推荐焊盘尺寸 Recommended Soldering PAD




| 回流焊接/波峰焊接 Reflow/Wave Soldering | | | | |
|---|---|---|---|---|
| 产品尺寸 Product Size | 尺寸/毫米 Dimension/mm | | | |
| | A | B | C | D |
| 1206 | 3.8-4.6 | 2.2 | 0.8-1.2 | 1.5-1.7 |
| 0805 | 2.6-3.4 | 1.2 | 0.7-1.1 | 1.2-1.4 |
| 0603 | 1.8-2.6 | 0.8 | 0.5-0.9 | 0.8-1.0 |

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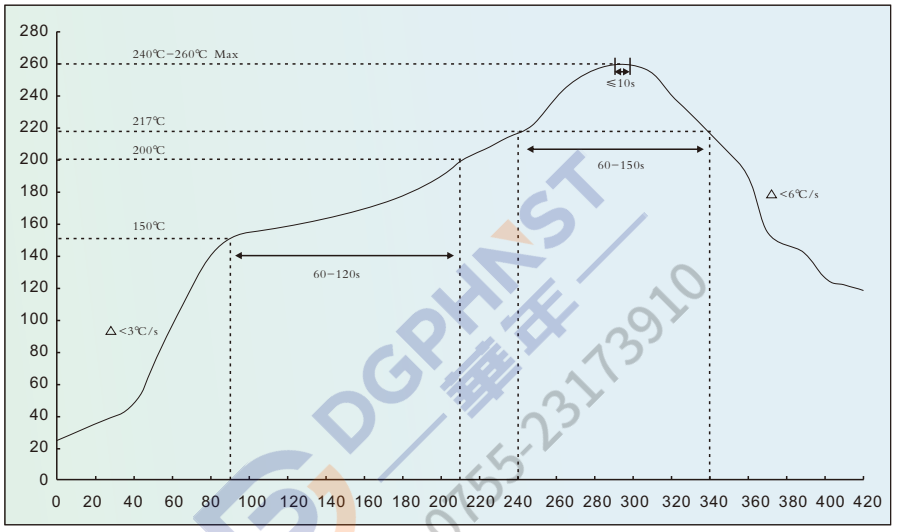
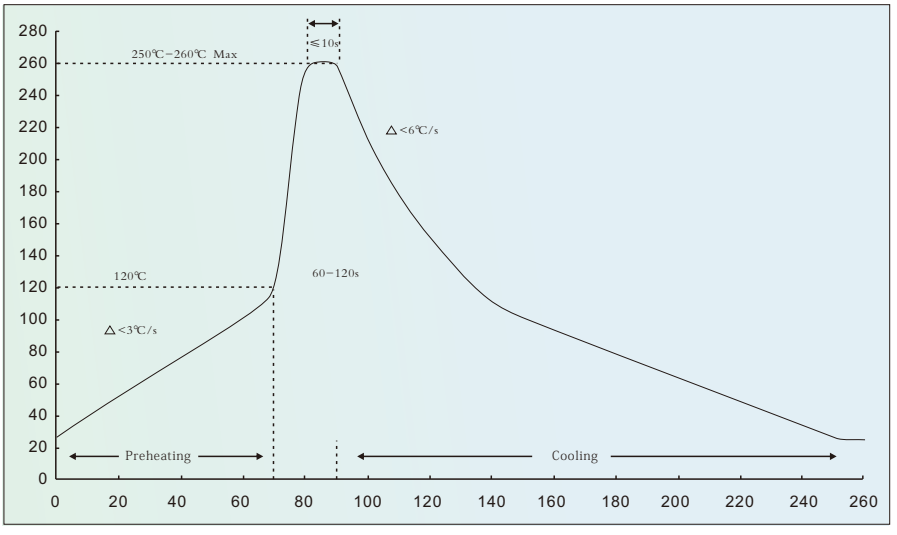
## 焊接条件与提示 Soldering Condition & Caution

| 推荐焊接条件Recommendee Soldering Condition (Refer to IPC/JEDEC J-STD-020D 4-1&5.2) | | | |
|---|---|---|---|
| 推荐曲线条件 Recommended Profile Condition | 锡铅焊接 Sn-Pb Soldering | 无铅焊接 Lead free Soldering | 波峰焊接 Wave Soldering |
| 升温速度（从预热阶段开始） Ramp-up Rate(From Pre-heat Stage) | <3℃/s | <3℃/s | △T<150℃ |
| 预热温度与时间 Per-heat Temperature & Time | 100-150℃ 60-120s | 150-200℃ 60-120s | 100-150℃ 60-120s |
| 焊接温度与时间 Soldering Temperature & Time | 183℃ 60-150s | 217℃ 60-150s | 260±5℃ 5±2s |
| 最高温度 Peak Temperature | 230±5℃ <260℃ | 240±5℃ <260℃ | 260±5℃ |
| 最高温度为5℃的时间 Time Within 5℃ of Peak Temperatrue | 10-20s | 20-30s | — |
| 降温速度 Ramp-down Rate | <6℃/s | <6℃/s | <6℃/s |
| 从25℃到最高温度时间 Time 25℃ to Peak Temperatrue | <6min | <8min | — |
| 手工烙铁焊接条件：350℃ 3S，避免烙铁头直接接触材料本体 Manual Soldering:Approx.350℃ for 3s,avoid solder iron tip direct touch component's body | | | |

## 推荐焊接温度曲线 Reommended Soldering Profile




**图一：无铅回流焊接温度曲线（锡银铜）**
**Fig1:Reflow Soldering Profile for Lead-free Solder(SnAgCu)**




**图二：波峰焊接温度曲线**
**Fig2:wave Soldering Profile**

1.推荐的配置文件是指IPC/JEDEC J-STD-020D & IEC-60068-2-58
The recommended profiles are referring to IPC/JEDEC J-STD-020D & IEC-60068-2-58

2.贴片二级管能承受最高焊接温度为260摄氏度的最长时间是10秒，最大焊接周期的三倍；参考文献：IEC-60068-2-58
Chip diodes are able to stand maximum soldering temperature up to 260℃ max for 10s,and the soldering cycles with max 3 times,referring to IEC-60068-2-58

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## 特性 Features

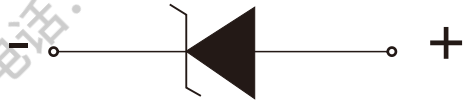
1.SMD模式，适合各种尺寸
SMD Chip Pattern,Available In Various Dimensions
2.电极表面为电镀锡，适合波峰焊和回流焊
Matte Tin Plating Termination Layer for Reflow & Wave Soldering
3.产品基材为氧化铝陶瓷基板，具有抗高热量及机械应力的能力
Aluminum Oxide Ceramic Substrate as Body,High Thermal and Mechanical Resist

## 应用 Application

适用于各种电子电路板
For General Purpose on Eleceronics Circuit Board

## 标识 Marking

标记为肖特基电压代码＆阴极终端
Marking as Schottky Voltage Code & Cathode Terminal

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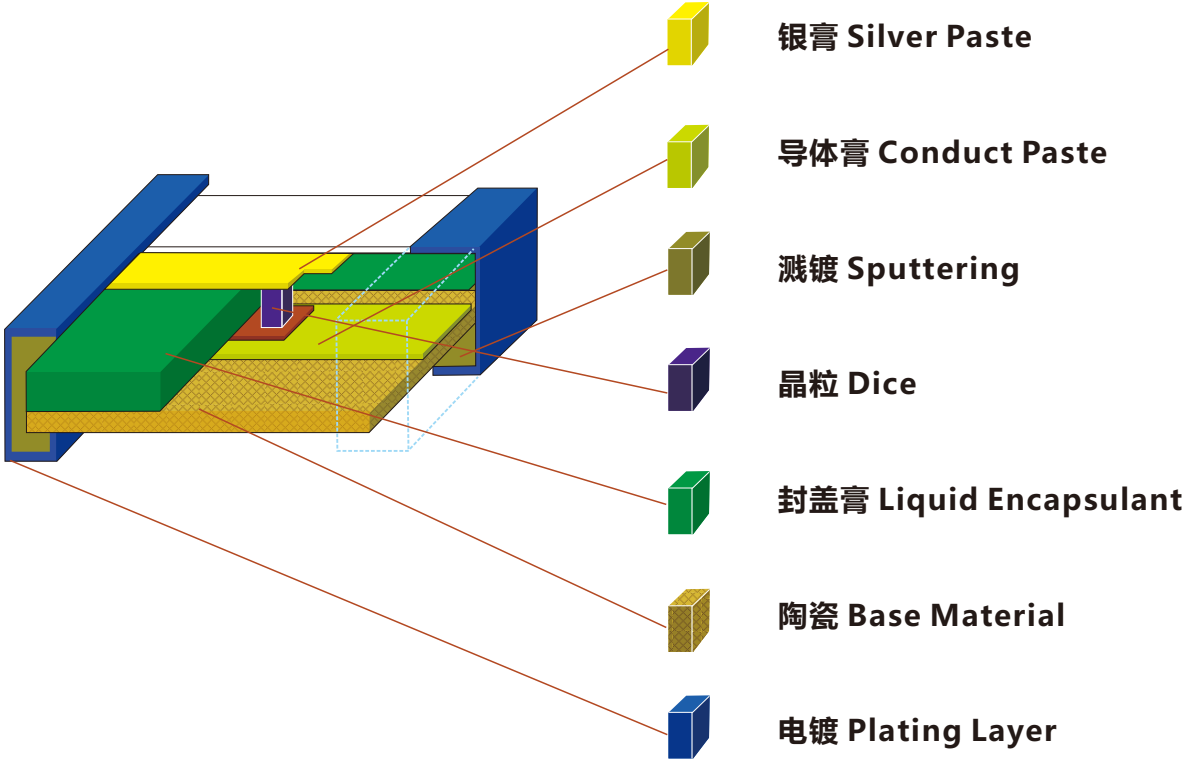
## 产品结构 Product Structure



## 产品尺寸 Product Size

单位Unit:mm

| 系列 Series | CDZ55 | CDZ55-S | CDZ55-T |
|---|---|---|---|
| 长L | 3.2±0.20 | 2.00±0.20 | 1.55±0.10 |
| 宽W | 1.50±0.20 | 1.25±0.20 | 0.80±0.10 |
| 高T | 0.75±0.10 | 0.75±0.10 | 0.65±0.10 |
| 背导长C | 0.55±0.20 | 0.45±0.20 | 0.35±0.10 |

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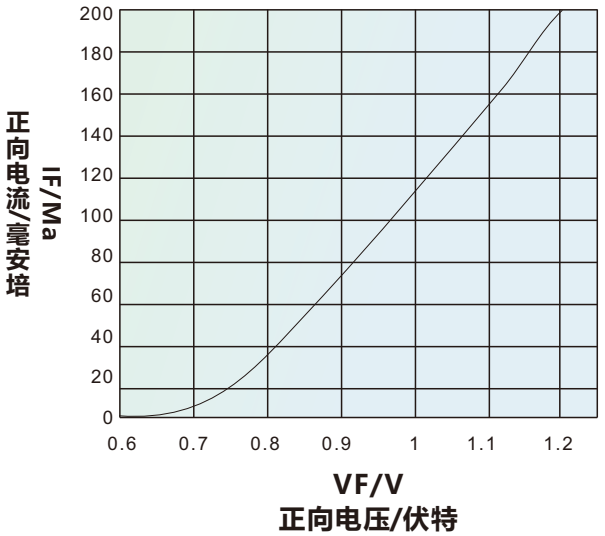
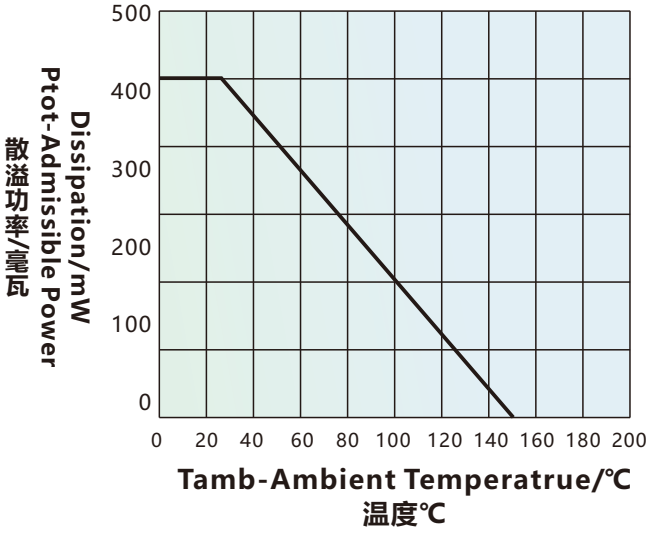
## 特性曲线Characterisric Curve

正向电流和电压Figuer 1.Forward Current vs Forward Voltage




功率衰减Figure 2.Power De-rating



## 电气特性，温度=25℃ Electrical Characteristice, Tamb=25℃

| 系列 Series | | CDZ55B | CDZ55C | CDZ55B-S | CDZ55C-S | CDZ55B-T | CDZ55C-M | CDZ55C-SM | CDZ55C-TM |
|---|---|---|---|---|---|---|---|---|---|
| 尺寸代码（英寸/毫米）<br>Size Code(Inch/mm) | | 1206 (3216) | 1206 (3216) | 0805 (2012) | 0805 (2012) | 0603 (1608) | 0603 (1608) | 0805 (2012) | 0603 (1608) |
| 操作温度<br>Operating Temperature | | -55～+150℃ | | | | | | | |
| 散溢功率<br>Power Dissipation | Ptot | 500mW | | | | 200mW | | 500mW | 200mW |
| 顺向电压，在200毫安<br>Forward Voltage,at 200mA | VF | 1.5V MAX | | | | | | | |
| 齐纳电压公差<br>Zener Voltage Tolerance | | 2% | 5% | 2% | 5% | 2% | 5% | 5% | 5% |
| 齐纳电压范围<br>Zener Voltage Range | VZ | 2.4～75V<br>(2.4V only 5%) | | | | | 5.1～5.6V | | |
| 最大齐纳阻抗<br>Max Zener Impedance | ZZT, ZZK | Refer Next Page Electrical Date | | | | | 5Refer Next Page Electrical Date | | |
| 最大反向漏电流<br>Max Reverse Leakage Current | IR | | | | | | <100uA@4.2V | | |

## 特性测试 Test Characteristice

| 测试项目 Test Item | 测试条件 Test Condition | 规格 Requierment |
|---|---|---|
| 可焊性<br>Solderability | 245±5℃,2±0.5秒锡炉浸锡<br>Sn bath at 245±5℃ for 2±0.5s | 焊锡面积＞95%<br>＞95% area tin covered |
| 焊接耐热<br>Resistance To Soldering Heat | 没有物理破损，电性在规格内<br>Sn bath at 260±5℃ for 10±2s<br>260±5℃，10±1秒 | $V_{F1}$ $V_R$ & $I_R$ 电性在规格内，外观没有破损<br>$V_{F1}$ $V_R$ & $I_R$ within spec; no mechanical damage |
| 高温高湿<br>Humidity Steady State | 85±3℃ 85%RH 条件下保持168小时.<br>At85±5℃ 85%RH for 168hrs | $V_{F1}$ $V_R$ & $I_R$电性在规格内<br>$V_{F1}$ $V_R$ & $I_R$ Within Spec |
| 连续顺向负荷寿命<br>Continue Forward Operating Life | IF=1.1*IO(165mA),保持1000小时.<br>电性在规格内<br>At 25℃ IF=1.1IF for 1000hrs | $V_{F1}$ $V_R$ & $I_R$电性在规格内<br>$V_{F1}$ $V_R$ & $I_R$ Within Spec |
| 冷热冲击<br>Thermal Shock | -55±3℃/5分钟→150±3℃/5分钟;<br>10循环.电性在规格内<br>-55±5℃/5min to 150±5℃/5min<br>for 10cycles | $V_{F1}$ $V_R$ & $I_R$电性在规格内<br>$V_{F1}$ $V_R$ & $I_R$ Within Spec |
| 弯折<br>Bending Strength | 弯曲2mm.外观没有破损，电性在规格<br>Bending up to 2mm for icycle | $V_{F1}$ $V_R$ & $I_R$电性在规格内，外观没有破损<br>$V_{F1}$ $V_R$ & $I_R$ Within Spec; no mechanical damage |

DGPHNST 一事一生 电话：0755-23173910

## 电性数据Electrical Data

CDZ55B&CDZ55B-S&CDZ55B-T 齐纳电压公差2%
CDZ55B&CDZ55B-S&CDZ55B-T 2% Zener Volatge Tolerance

| 料号 Part Number | | 标识 Marking | 正常齐纳电压 Nominal Zener Voltage | | 最大齐纳阻抗 Max Zener Impedance | | | | 最大反向漏电流 Max Reverse Leakage Current | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | VZ @ IZT | | ZZT @ IZT | | ZZK @ IZK | | IR @ VR | |
| CDZ55B | CDZ55B-S | | Min V | Max V | Ω | mA | Ω | mA | uA | V |
| CDZ55B2V7 | CDZ55B2V7S | 2V7 | 2.65 | 2.75 | 85 | 5 | 600 | 1 | 10 | 1 |
| CDZ55B3V0 | CDZ55B3V0S | 3 | 2.94 | 3.06 | 85 | 5 | 600 | 1 | 4 | 1 |
| CDZ55B3V3 | CDZ55B3V3S | 3V3 | 3.23 | 3.37 | 85 | 5 | 600 | 1 | 2 | 1 |
| CDZ55B3V6 | CDZ55B3V6S | 3V6 | 3.53 | 3.67 | 85 | 5 | 600 | 1 | 2 | 1 |
| CDZ55B3V9 | CDZ55B3V9S | 3V9 | 3.82 | 3.98 | 85 | 5 | 600 | 1 | 2 | 1 |
| CDZ55B4V3 | CDZ55B4V3S | 4V3 | 4.21 | 4.39 | 80 | 5 | 600 | 1 | 1 | 1 |
| CDZ55B4V7 | CDZ55B4V7S | 4V7 | 4.61 | 4.79 | 70 | 5 | 600 | 1 | 0.5 | 1 |
| CDZ55B5V1 | CDZ55B5V1S | 5V1 | 5.00 | 5.20 | 50 | 5 | 550 | 1 | 0.1 | 1 |
| CDZ55B5V6 | CDZ55B5V6S | 5V6 | 5.49 | 5.71 | 30 | 5 | 450 | 1 | 0.1 | 1 |
| CDZ55B6V2 | CDZ55B6V2S | 6V2 | 6.08 | 6.32 | 10 | 5 | 200 | 1 | 0.1 | 2 |
| CDZ55B6V8 | CDZ55B6V8S | 6V8 | 6.66 | 6.94 | 8 | 5 | 150 | 1 | 0.1 | 3 |
| CDZ55B7V5 | CDZ55B7V5S | 7V5 | 7.35 | 7.65 | 7 | 5 | 50 | 1 | 0.1 | 5 |
| CDZ55B8V2 | CDZ55B8V2S | 8V2 | 8.04 | 8.36 | 7 | 5 | 50 | 1 | 0.1 | 6.2 |
| CDZ55B9V1 | CDZ55B9V1S | 9V1 | 8.92 | 9.28 | 10 | 5 | 50 | 1 | 0.1 | 6.8 |
| CDZ55B10 | CDZ55B10S | 10 | 9.80 | 10.20 | 15 | 5 | 70 | 1 | 0.1 | 7.5 |
| CDZ55B11 | CDZ55B11S | 11 | 10.78 | 11.22 | 20 | 5 | 70 | 1 | 0.1 | 8.2 |
| CDZ55B12 | CDZ55B12S | 12 | 11.79 | 12.24 | 20 | 5 | 90 | 1 | 0.1 | 9.1 |
| CDZ55B13 | CDZ55B13S | 13 | 12.74 | 13.26 | 26 | 5 | 110 | 1 | 0.1 | 10 |
| CDZ55B15 | CDZ55B15S | 15 | 14.70 | 15.30 | 30 | 5 | 110 | 1 | 0.1 | 11 |
| CDZ55B16 | CDZ55B16S | 16 | 15.68 | 16.32 | 40 | 5 | 170 | 1 | 0.1 | 12 |
| CDZ55B18 | CDZ55B18S | 18 | 17.64 | 18.36 | 50 | 5 | 170 | 1 | 0.1 | 13 |
| CDZ55B20 | CDZ55B20S | 20 | 19.60 | 20.40 | 55 | 5 | 220 | 1 | 0.1 | 15 |
| CDZ55B22 | CDZ55B22S | 22 | 21.56 | 22.44 | 55 | 5 | 220 | 1 | 0.1 | 16 |
| CDZ55B24 | CDZ55B24S | 24 | 23.52 | 24.48 | 80 | 5 | 220 | 1 | 0.1 | 18 |
| CDZ55B27 | CDZ55B27S | 27 | 26.46 | 27.54 | 80 | 5 | 220 | 1 | 0.1 | 20 |
| CDZ55B30 | CDZ55B30S | 30 | 29.40 | 30.60 | 80 | 5 | 220 | 1 | 0.1 | 22 |
| CDZ55B33 | CDZ55B33S | 33 | 32.34 | 33.66 | 80 | 5 | 220 | 1 | 0.1 | 24 |
| CDZ55B36 | CDZ55B36S | 36 | 35.28 | 36.72 | 80 | 5 | 220 | 1 | 0.1 | 27 |

*39V-75V可用39V-75V Available Upon Request

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## CDZ55B & CDZ55B-S&CDZ55C-T齐纳电压公差5%
## CDZ55C & CDZ55C-S&CDZ55C-T 5% Zener Volatge Tolerance

| 料号 Part Number | | 标识 Marking | 正常齐纳电压 Nominal Zener Voltage | | 最大齐纳阻抗 Max Zener Impedance | | | | 最大反向漏电流 Max Reverse Leakage Current | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | VZ @ IZT | | ZZT @ IZT | | ZZK @ IZK | | IR @ VR | |
| CDZ55C | CDZ55C-S | | Min V | Max V | Ω | mA | Ω | mA | uA | V |
| CDZ55C2V4 | CDZ55C2V4S | 2V4 | 2.28 | 2.52 | 85 | 5 | 600 | 1 | 100 | 1 |
| CDZ55C2V7 | CDZ55C2V7S | 2V7 | 2.57 | 2.84 | 85 | 5 | 600 | 1 | 10 | 1 |
| CDZ55C3V0 | CDZ55C3V0S | 3V0 | 2.85 | 3.15 | 85 | 5 | 600 | 1 | 4 | 1 |
| CDZ55C3V3 | CDZ55C3V3S | 3V3 | 3.14 | 3.47 | 85 | 5 | 600 | 1 | 2 | 1 |
| CDZ55C3V6 | CDZ55C3V6S | 3V6 | 3.42 | 3.78 | 85 | 5 | 600 | 1 | 2 | 1 |
| CDZ55C3V9 | CDZ55C3V9S | 3V9 | 3.71 | 4.10 | 85 | 5 | 600 | 1 | 2 | 1 |
| CDZ55C4V3 | CDZ55C4V3S | 4V3 | 4.09 | 4.52 | 80 | 5 | 600 | 1 | 1 | 1 |
| CDZ55C4V7 | CDZ55C4V7S | 4V7 | 4.47 | 4.94 | 70 | 5 | 600 | 1 | 0.5 | 1 |
| CDZ55C5V1 | CDZ55C5V1S | 5V1 | 4.85 | 5.36 | 50 | 5 | 550 | 1 | 0.1 | 1 |
| CDZ55C5V6 | CDZ55C5V6S | 5V6 | 5.32 | 5.88 | 30 | 5 | 450 | 1 | 0.1 | 1 |
| CDZ55C6V2 | CDZ55C6V2S | 6V2 | 5.89 | 6.51 | 10 | 5 | 200 | 1 | 0.1 | 2 |
| CDZ55C6V8 | CDZ55C6V8S | 6V8 | 6.46 | 7.14 | 8 | 5 | 150 | 1 | 0.1 | 3 |
| CDZ55C7V5 | CDZ55C7V5S | 7V5 | 7.13 | 7.88 | 7 | 5 | 50 | 1 | 0.1 | 5 |
| CDZ55C8V2 | CDZ55C8V2S | 8V2 | 7.79 | 8.61 | 7 | 5 | 50 | 1 | 0.1 | 6.2 |
| CDZ55C9V1 | CDZ55C9V1S | 9V1 | 8.65 | 9.56 | 10 | 5 | 50 | 1 | 0.1 | 6.8 |
| CDZ55C10 | CDZ55C10S | 10 | 9.50 | 10.50 | 15 | 5 | 70 | 1 | 0.1 | 7.5 |
| CDZ55C11 | CDZ55C11S | 11 | 10.45 | 11.55 | 20 | 5 | 70 | 1 | 0.1 | 8.2 |
| CDZ55C12 | CDZ55C12S | 12 | 11.40 | 12.60 | 20 | 5 | 90 | 1 | 0.1 | 9.1 |
| CDZ55C13 | CDZ55C13S | 13 | 12.35 | 13.65 | 26 | 5 | 110 | 1 | 0.1 | 10 |
| CDZ55C15 | CDZ55C15S | 15 | 14.25 | 15.75 | 30 | 5 | 110 | 1 | 0.1 | 11 |
| CDZ55C16 | CDZ55C16S | 16 | 15.20 | 16.80 | 40 | 5 | 170 | 1 | 0.1 | 12 |
| CDZ55C18 | CDZ55C18S | 18 | 17.10 | 18.90 | 50 | 5 | 170 | 1 | 0.1 | 13 |
| CDZ55C20 | CDZ55C20S | 20 | 19.00 | 21.00 | 55 | 5 | 220 | 1 | 0.1 | 15 |
| CDZ55C22 | CDZ55C22S | 22 | 20.90 | 23.10 | 55 | 5 | 220 | 1 | 0.1 | 16 |
| CDZ55C24 | CDZ55C24S | 24 | 22.80 | 25.20 | 80 | 5 | 220 | 1 | 0.1 | 18 |
| CDZ55C27 | CDZ55C27S | 27 | 25.65 | 28.35 | 80 | 5 | 220 | 1 | 0.1 | 20 |
| CDZ55C30 | CDZ55C30S | 30 | 28.50 | 31.50 | 80 | 5 | 220 | 1 | 0.1 | 22 |
| CDZ55C33 | CDZ55C33S | 33 | 31.35 | 34.65 | 80 | 5 | 220 | 1 | 0.1 | 24 |
| CDZ55C36 | CDZ55C36S | 36 | 34.20 | 37.80 | 80 | 5 | 220 | 1 | 0.1 | 27 |

*39V-75V可用39V-75V Available Upon Request

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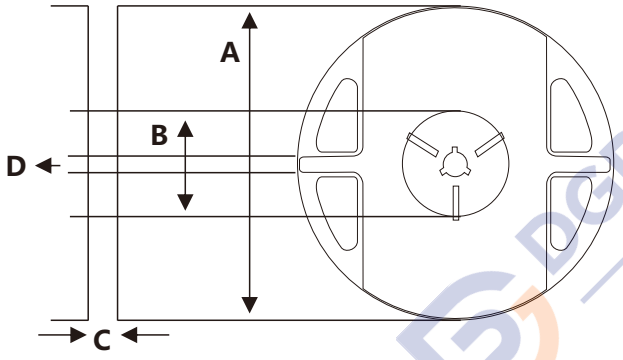
## 包装 Packing

组件的纸带及卷盘的规格如"IEC 60286-3自动封装处理
Components tape and reel specifications are referring to "IEC 60286-3 Packaging of components for automatic handling

## 卷盘尺寸 Reel Dimensions




单位毫米 Unit:mm

| 项目 Item | 尺寸Dimension |
|---|---|
| A | 178.0±1.0 |
| B | 60.0±1.0 |
| C | 9.5±0.3 |
| D | 13.0±0.3 |

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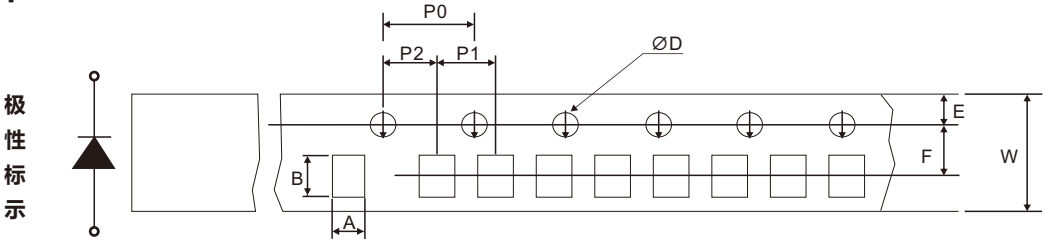
电话：0755-23173910

## 纸带尺寸 Tape Dimensions

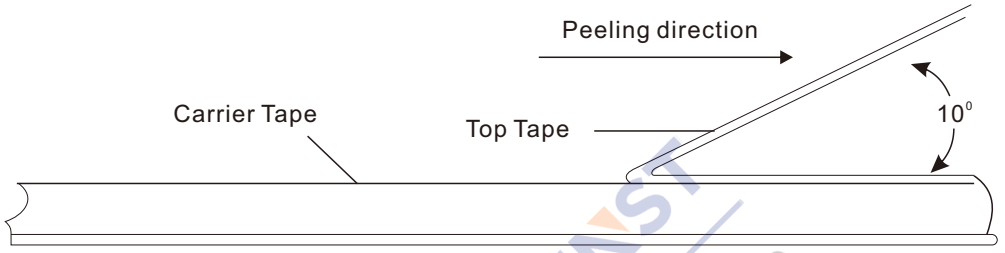



单位毫米 Unit:mm

| 尺寸 Dimension | 1206 | 0805 | 0603 |
|---|---|---|---|
| A | 2.00±0.20 | 1.65±0.20 | 1.10±0.10 |
| B | 3.60±0.20 | 2.40±0.20 | 1.90±0.10 |
| W | 8.00±0.20 | 8.00±0.20 | 8.00±0.20 |
| D | 1.50±0.10 | 1.50±0.10 | 1.50±0.10 |
| E | 1.75±0.10 | 1.75±0.10 | 1.75±0.10 |
| F | 3.50±0.10 | 3.50±0.10 | 3.50±0.10 |
| P0 | 4.00±0.10 | 4.00±0.10 | 4.00±0.10 |
| P1 | 4.00±0.10 | 4.00±0.10 | 4.00±0.10 |
| P2 | 2.00±0.05 | 2.00±0.05 | 2.00±0.05 |

## 上胶带剥离 Top Tape Peeling

上胶带剥离角度在165°~180°之间，从载体上剥离角度如下图所示
The top tape peeling-off angle from carrier tape is within 165°-180° during application




## 订货方式 Ordering Procedure

**订货方式(例如 芯片稳压二极管0805 5% 12V 0.1-0.5W 5mA)**
**Ordering Procedure（Example Chip Zener Diode 0805 5% 12V 0.1-0.5W 5mA)**
**料号（Part Number):CDZ55C12S**

| CD | Z55 | C | 12 | S | |
|---|---|---|---|---|---|
| 产品系列<br>Product Series<br>CD:贴片二极管<br>Chip Diode | 产品类型<br>Product Type<br>Z55:Zener 0.1-0.5W 5mA<br>Z52:Zener 0.1-0.5W 20mA<br>Z47:Zener 1W | 公差<br>Tolerance<br>B=±2%<br>C=±5%<br>L=±3%<br>M=+5% | 电压<br>Voltage<br>2V2=2.2V<br>3V0=3V<br>12=12V<br>30=30V | 尺寸<br>Size<br>A:2010(SMA等同equivalent)<br>S:0805<br>T:0603<br>Q:0402 | 特殊代码<br>Special Code<br>:Lead-free<br>M:Low IR |

## 卷装数量 Reel Quantity

每卷5,000PCS/5,000PCS Per Reel

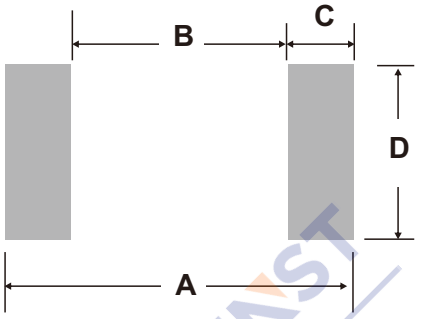
## 储存条件 Storage Condition

由于高温和潮湿或化学环境，产品终端的可焊性会降低.环境温度需在40℃以下，环境相对湿度需小于75%，远离化学物
Product termination solderability can degrade due to high temperature and humidity or chemical envionment. Storage condition must be in an ambient temperature of ＜40℃ and ambient humidity of ＜75%RH,and free from chemical.

## 免责声明 Disclaimers

以下情况应避免使用这些产品：故障可能造成人身伤亡，严重的财产或环境损害，如医疗，军事，航空，太空或生命支持设备损坏等
These products are not designed for use in applications where any failure or malfuncioon may resulted in personal injury,death or severe property or environmental damage such as medical,military,aircraft,space or life support equipments.

## 推荐焊盘尺寸 Recommended Soldering PAD




| 回流焊接/波峰焊接 Reflow/Wave Soldering | | | | |
|---|---|---|---|---|
| 产品尺寸 Product Size | 尺寸/毫米 Dimension/mm | | | |
| | A | B | C | D |
| 1206 | 3.8-4.6 | 2.2 | 0.8-1.2 | 1.5-1.7 |
| 0805 | 2.6-3.4 | 1.2 | 0.7-1.1 | 1.2-1.4 |
| 0603 | 1.8-2.6 | 0.8 | 0.5-0.9 | 0.8-1.0 |

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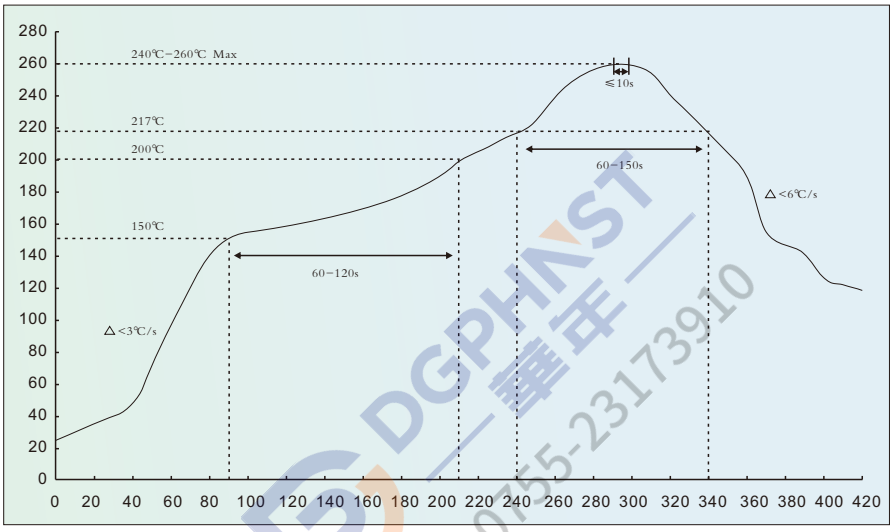
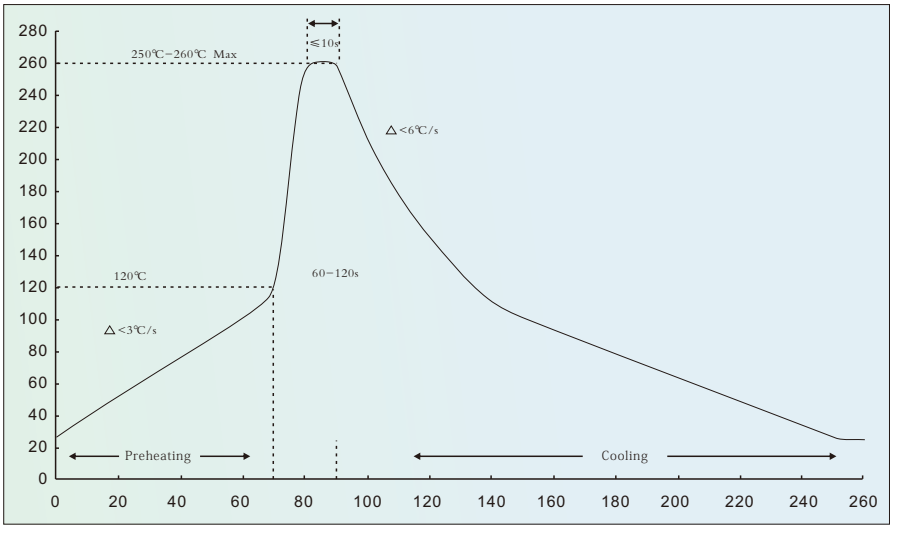
## 焊接条件与提示 Soldering Condition & Caution

| 推荐焊接条件Recommendee Soldering Condition (Refer to IPC/JEDEC J-STD-020D 4-1&5.2) | | | |
|---|---|---|---|
| 推荐曲线条件 Recommended Profile Condition | 锡铅焊接 Sn-Pb Soldering | 无铅焊接 Lead free Soldering | 波峰焊接 Wave Soldering |
| 升温速度（从预热阶段开始） Ramp-up Rate(From Pre-heat Stage) | <3℃/s | <3℃/s | △T<150℃ |
| 预热温度与时间 Per-heat Temperature & Time | 100-150℃ 60-120s | 150-200℃ 60-120s | 100-150℃ 60-120s |
| 焊接温度与时间 Soldering Temperature & Time | 183℃ 60-150s | 217℃ 60-150s | 260±5℃ 5±2s |
| 最高温度 Peak Temperature | 230±5℃ <260℃ | 240±5℃ <260℃ | 260±5℃ |
| 最高温度为5℃的时间 Time Within 5℃ of Peak Temperatrue | 10-20s | 20-30s | — |
| 降温速度 Ramp-down Rate | <6℃/s | <6℃/s | <6℃/s |
| 从25℃到最高温度时间 Time 25℃ to Peak Temperatrue | <6min | <8min | — |
| 手工烙铁焊接条件：350℃ 3S，避免烙铁头直接接触材料本体 Manual Soldering:Approx.350℃ for 3s,avoid solder iron tip direct touch component's body | | | |

## 推荐焊接温度曲线 Reommended Soldering Profile




**图一：无铅回流焊接温度曲线（锡银铜）**
**Fig1:Reflow Soldering Profile for Lead-free Solder(SnAgCu)**




**图二：波峰焊接温度曲线**
**Fig2:wave Soldering Profile**

1.推荐的配置文件是指IPC/JEDEC J-STD-020D & IEC-60068-2-58
The recommended profiles are referring to IPC/JEDEC J-STD-020D & IEC-60068-2-58

2.贴片二级管能承受最高焊接温度为260摄氏度的最长时间是10秒，最大焊接周期的三倍；参考文献：IEC-60068-2-58
Chip diodes are able to stand maximum soldering temperature up to 260℃ max for 10s,and the soldering cycles with max 3 times,referring to IEC-60068-2-58

## 特性 Features

1.SMD模式，适合各种尺寸
SMD Chip Pattern,Available In Various Dimensions
2.电极表面为电镀锡，适合波峰焊和回流焊
Matte Tin Plating Termination Layer for Reflow & Wave Soldering
3.产品基材为氧化铝陶瓷基板，具有抗高热量及机械应力的能力
Aluminum Oxide Ceramic Substrate as Body,High Thermal and Mechanical Resist

## 应用 Application

适用于各种电子电路板
For General Purpose on Eleceronics Circuit Board

## 标识 Marking

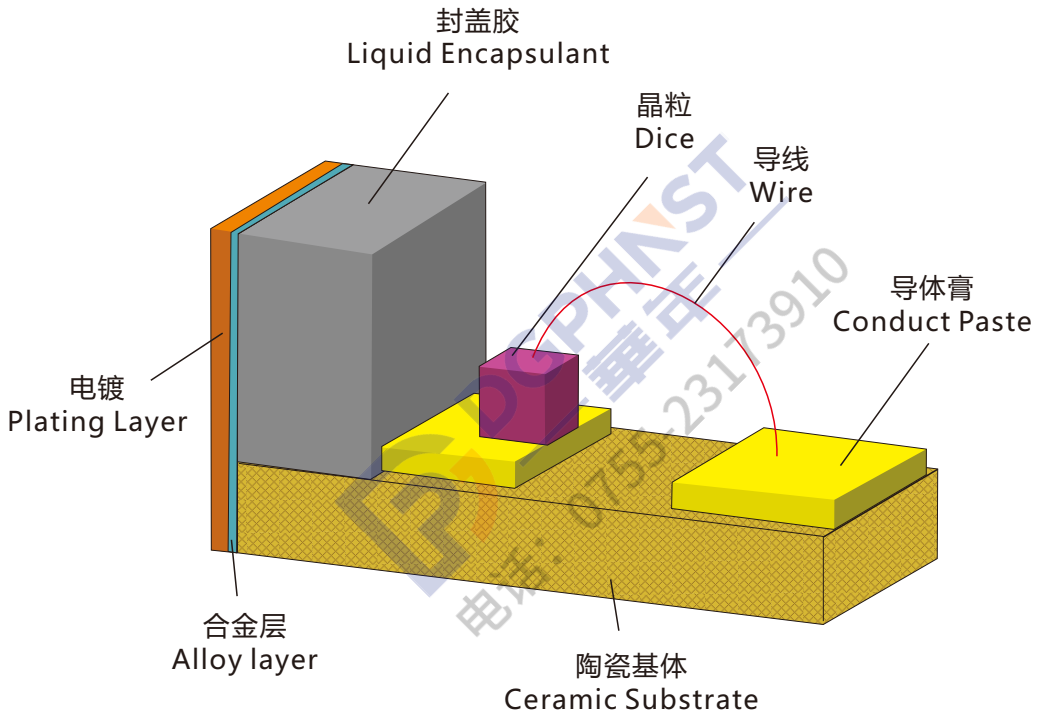
标记为肖特基电压＆电流代码＆阴极终端
Marking as Schottky Voltage & Current Code & Cathode Terminal

DGPHNST 喜年 电话：0755-23173910

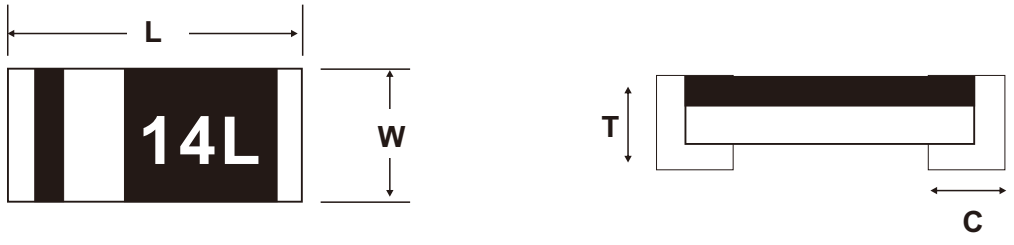
## 电气特性，温度=25℃ Electrical Characteristics,Tamb=25℃

| 系列 Series | | CDB140SL | CDB0530SL | CDB0230TL | CDB0230TM |
|---|---|---|---|---|---|
| 尺寸代码（英寸/毫米）Size Code(Inch/mm) | | 0805(2012) | 0805(2012) | 0603(1608) | 0603(1608) |
| 反向电压（重复峰值）Reverse voltage (repetivtive peak) | VRM | 40V | 30V | 30V | 30V |
| 反向电压（直流）Reverse voltage(DC) | VR | 40V | 20V | 30V | 30V |
| 平均整流顺向电流 Average rectified forward current | Io | 1A | 0.5A | 0.2A | 0.2A |
| 顺向峰值突波电流 Forward current surge peak | IFSM | 5A | 5A | 1A | 1A |
| 界面温度 Junction Temperature | Tj | 150℃ | 150℃ | 150℃ | 150℃ |
| 操作温度＆储存温度范围 Operating &Storage Temperature range | Tstg | -55℃~+150℃ | | | |

## 产品结构 Product Structure




## 产品尺寸 Product Size




单位Unit:mm

| 系列Series | CDB140SL | CDB0530SL | CDB0230TL | CDB0230TM |
|---|---|---|---|---|
| 长L | 2.00±0.20 | 2.00±0.20 | 1.55±0.10 | 1.55±0.10 |
| 宽W | 1.25±0.20 | 1.25±0.20 | 0.80±0.10 | 0.80±0.10 |
| 高T | 0.75±0.10 | 0.75±0.10 | 0.65±0.10 | 0.65±0.10 |
| 背导长C | 0.45±0.20 | 0.45±0.20 | 0.35±0.10 | 0.35±0.10 |

## 特性测试 Test Characteristice

| 测试项目 Test Item | 测试条件 Test Condition | 规格 Requierment |
|---|---|---|
| 可焊性<br>Solderability | 245±5℃,2±0.5秒锡炉浸锡<br>Sn bath at 245±5℃ for 2±0.5s | 焊锡面积＞95%<br>＞95% area tin covered |
| 焊接耐热<br>Resistance To Soldering Heat | 没有物理破损，电性在规格内<br>Sn bath at 260±5℃ for 10±2s<br>260±5℃，10±1秒 | $V_{F1}$ $V_R$ & $I_R$ 电性在规格内，外观没有破损<br>$V_{F1}$ $V_R$ & $I_R$ within spec; no mechanical damage |
| 高温高湿<br>Humidity Steady State | 85±3℃ 85%RH 条件下保持168小时.<br>At85±5℃ 85%RH for 168hrs | $V_{F1}$ $V_R$ & $I_R$电性在规格内<br>$V_{F1}$ $V_R$ & $I_R$ Within Spec |
| 连续顺向负荷寿命<br>Continue Forward Operating Life | IF=1.1*IO(165mA),保持1000小时.<br>电性在规格内<br>At 25℃ IF=1.1IF for 1000hrs | $V_{F1}$ $V_R$ & $I_R$电性在规格内<br>$V_{F1}$ $V_R$ & $I_R$ Within Spec |
| 冷热冲击<br>Thermal Shock | -55±3℃/5分钟→150±3℃/5分钟;<br>10循环.电性在规格内<br>-55±5℃/5min to 150±5℃/5min<br>for 10cycles | $V_{F1}$ $V_R$ & $I_R$电性在规格内<br>$V_{F1}$ $V_R$ & $I_R$ Within Spec |
| 弯折<br>Bending Strength | 弯曲2mm.外观没有破损，电性在规格<br>Bending up to 2mm for icycle | $V_{F1}$ $V_R$ & $I_R$电性在规格内，外观没有破损<br>$V_{F1}$ $V_R$ & $I_R$ Within Spec; no mechanical damage |

## 电性数据Electrical Data

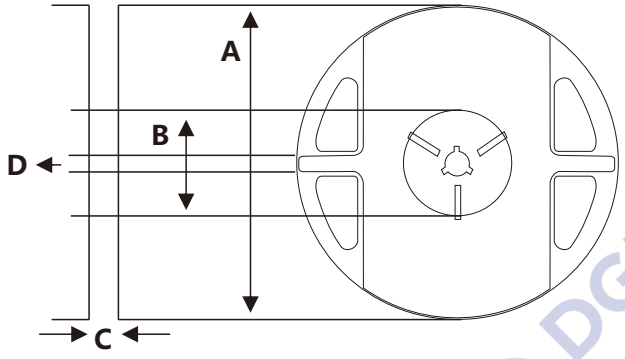
| 料号<br>Part Number | 封装尺寸<br>Package Size | 顺向电压<br>Forward Voltage | | 反向电流<br>Resistive Current | | 标识<br>Marking |
|---|---|---|---|---|---|---|
| | | VF | IF | IR | VR | |
| CDB140SL | 0805 | 0.55V | 0.7A | 50uA | 40V | 14L |
| CDB0530SL | 0805 | 0.36V | 0.1A | 100uA | 20V | O3L |
| | | 0.47V | 0.5A | | | |
| CDB0230TL | 0603 | 0.5V | 0.2A | 30uA | 10V | YL |
| CDB0230TM | 0603 | 0.6V | 0.2A | 1uA | 10V | YM |

DCFHST 电话：0755-23173910

## 包装 Packing

组件的纸带及卷盘的规格如"IEC 60286-3自动封装处理
Components tape and reel specifications are referring to "IEC 60286-3 Packaging of components for automatic handling

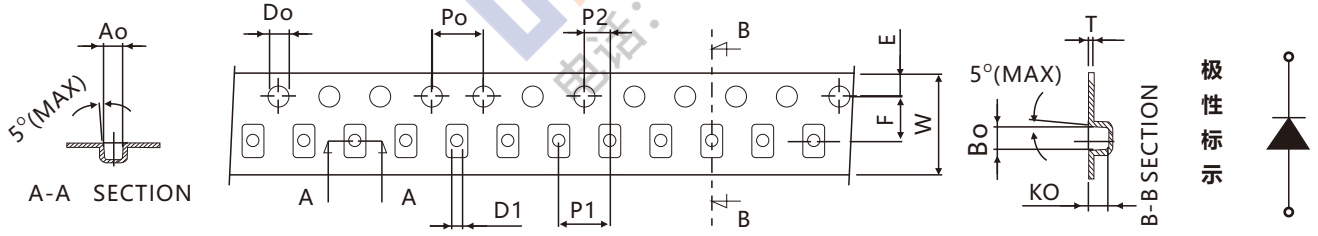
## 卷盘尺寸 Reel Dimensions




单位毫米 Unit:mm

| 项目 Item | 尺寸Dimension |
|---|---|
| A | 178.0±1.0 |
| B | 60.0±1.0 |
| C | 9.5±0.3 |
| D | 13.0±0.3 |

## 纸带尺寸 Tape Dimensions



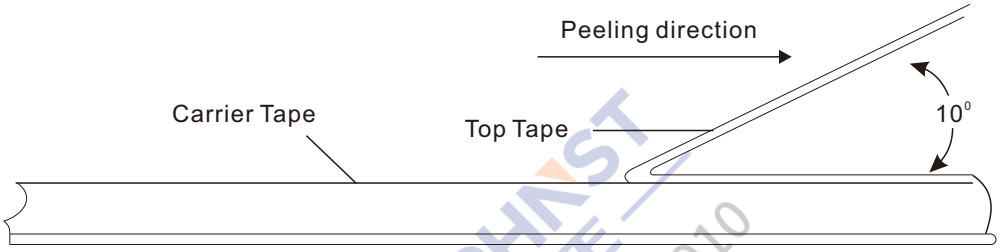

单位毫米 Unit:mm

| 尺寸 Dimension | 0805 | 0603 |
|---|---|---|
| Ao | 1.65±0.10 | 1.10±0.05 |
| Bo | 2.35±0.10 | 1.90±0.05 |
| Ko | 1.50±0.10 | 1.05±0.05 |
| Po | 4.00±0.10 | 4.00±0.10 |
| P1 | 4.00±0.10 | 4.00±0.10 |
| P2 | 2.00±0.10 | 2.00±0.05 |
| T | 0.25±0.10 | 0.20±0.05 |
| E | 1.75±0.10 | 1.75±0.10 |
| F | 3.50±0.10 | 3.50±0.05 |
| Do | 1.55±0.05 | 1.55±0.05 |
| D1 | 1.00±0.10 | 0.50±0.05 |
| W | 8.00±0.30 | 8.00±0.30 |
| 10Po | 40.0±0.20 | 40.0±0.20 |

DGPHNST 華年 电话：0755-23173910

## 上胶带剥离 Top Tape Peeling

上胶带剥离角度165°-180°之间，从载体上剥离角度如下图所示
The top tape peeling-off angle from carrier tape is within 165°-180° during application

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## 订货方式(例如 芯片肖特基二级管0805 1A 40V Low VF)
## Ordering Procedure（Example Chip Schottky Diode 0805 1A 40V Low VF)
## 料号（Part Number):CDB140SL

| CD | B140 | S | L |
|---|---|---|---|
| 产品系列<br>Product Series | 产品类别<br>Product Type | 封装尺寸<br>Package Size | 特殊代码<br>Special Code |
| CD:贴片二极管<br>CD:Chip Diode | B肖特基二级管<br>B：Schottky Barrier Diode<br>120:1A,20V<br>130:1A,30V<br>140:1A,40V<br>160:1A,60V<br>0504:0.5A,40V<br>0230:0.2A,30V | C:SMC<br>B:SMB<br>A:2010<br>:1206<br>S:0805<br>T:0603 | :Lead-free<br>L:Low VF<br>M:Low IR |

## 卷装数量 Reel Quantity

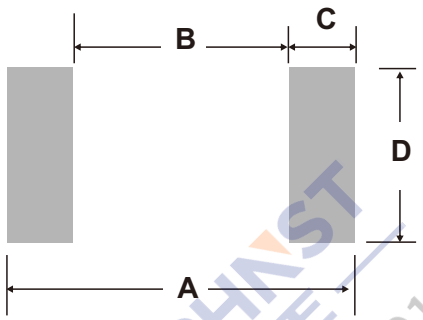
每卷5,000PCS/5,000PCS Per Reel

## 焊接条件 Soldering Condition

| 焊接条件与提示<br>Soldering Condition & Caution | | | |
|---|---|---|---|
| 推荐焊接条件<br>Recommendee Soldering Condition<br>(Refer to IPC/JEDEC J-STD-020D 4-1＆5.2) | | | |
| 推荐曲线条件<br>Recommended Profile Condition | 锡铅焊接<br>Sn-Pb Soldering | 无铅焊接<br>Lead free Soldering | 波峰焊接<br>Wave Soldering |
| 升温速度（从预热阶段开始）<br>Ramp-up Rate(From Pre-heat Stage) | <3℃/s | <3℃/s | △T<150℃ |
| 预热温度与时间<br>Per-heat Temperature & Time | 100-150℃<br>60-120s | 150-200℃<br>60-120s | 100-150℃<br>60-120s |
| 焊接温度与时间<br>Soldering Temperature & Time | 183℃<br>60-150s | 217℃<br>60-150s | 260±5℃<br>5±2s |
| 最高温度<br>Peak Temperature | 230±5℃<br><260℃ | 240±5℃<br><260℃ | 260±5℃ |
| 最高温度为5℃的时间<br>Time Within 5℃ of Peak Temperatrue | 10-20s | 2030s | — |
| 降温速度<br>Ramp-down Rate | <6℃/s | <6℃/s | <6℃/s |
| 从25℃到最高温度时间<br>Time 25℃ to Peak Temperatrue | <6min | <8min | — |
| 手工烙铁焊接条件：350℃ 3S，避免烙铁头直接接触材料本体<br>Manual Soldering:Approx.350℃ for 3s,avoid solder iron tip direct touch component's body | | | |

PGFHNST 晶导微 电话：0755-23173990

## 推荐焊盘尺寸 Recommended Soldering PAD




| 回流焊接/波峰焊接 Reflow/Wave Soldering | | | | |
|---|---|---|---|---|
| 产品尺寸 Product Size | 尺寸/毫米 Dimension/mm | | | |
| | A | B | C | D |
| 0805 | 2.6-3.4 | 1.2 | 0.7-1.1 | 1.2-1.4 |
| 0603 | 1.8-2.6 | 0.8 | 0.5-0.9 | 0.8-1.0 |

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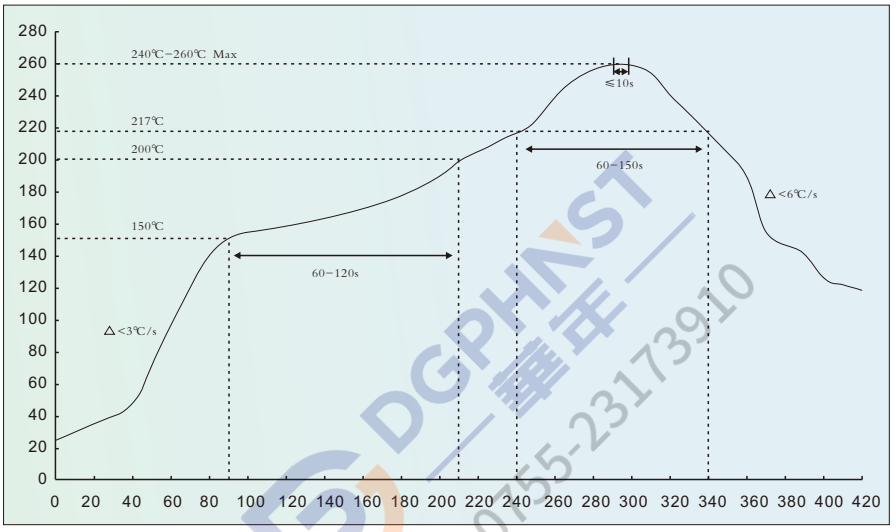
## 储存条件 Storage Condition

由于高温和潮湿或化学环境，产品终端的可焊性会降低.环境温度需在40℃以下，环境相对湿度需小于75%，远离化学物
Product termination solderability can degrade due to high temperature and humidity or chemical envionment. Storage condition must be in an ambient temperature of ＜40℃ and ambient humidity of ＜75%RH,and free from chemical.

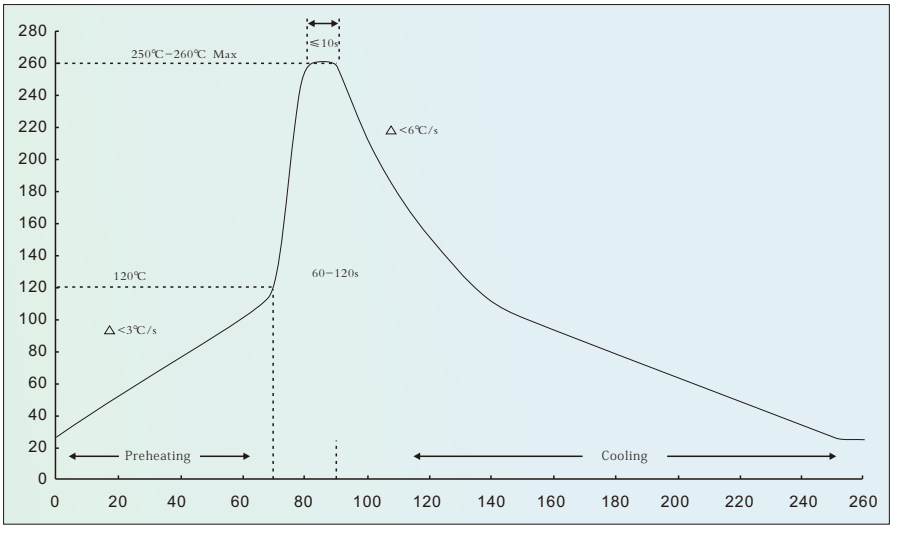
## 免责声明 Disclaimers

以下情况应避免使用这些产品：故障可能造成人身伤亡，严重的财产或环境损害，如医疗，军事，航空，太空或生命支持设备损坏等
These products are not designed for use in applications where any failure or malfuncioon may resulted inpersonal injury, death or severe property or environmental damage such as medical,military,aircraft,space or life support equipments.

## 推荐焊接温度曲线 Reommended Soldering Profile




**图一：无铅回流焊接温度曲线（锡银铜）**
**Fig1:Reflow Soldering Profile for Lead-free Solder(SnAgCu)**




**图二：波峰焊接温度曲线**
**Fig2:wave Soldering Profile**

1.推荐的配置文件是指IPC/JEDEC J-STD-020D & IEC-60068-2-58
The recommended profiles are referring to IPC/JEDEC J-STD-020D & IEC-60068-2-58

2.贴片二级管能承受最高焊接温度为260摄氏度的最长时间是10秒，最大焊接周期的三倍；参考文献：IEC-60068-2-58
Chip diodes are able to stand maximum soldering temperature up to 260℃ max for 10s,and the soldering cycles with max 3 times,referring to IEC-60068-2-58

| Item 项目 | Test Procedure 测试方法 |
|---|---|
| Solderability<br>焊锡性<br>MIL-STD-202G<br>METHOD208H | 245±5℃，2±0.5s solder bath dipping.Termination tinned area covered＞95%<br>245±5℃，2±0.5秒锡炉浸锡，焊锡面积＞95% |
| Steam Aging<br>Solderability<br>蒸汽老化可焊性<br>JESD22-B102-C | 98±3℃，100%RH，4Hrs then for solderability test.Termination tinned area covered＞95%<br>98±3℃，100%RH,4小时后做焊锡性测试，焊锡面积＞95% |
| Resistance to<br>soldering heat<br>抗焊锡热<br>MIL-STD-750D<br>METHOD2031.2 | 260±5℃,10±1s solder bath dipping.No mechanical damaged.Electrcal properties within spec<br>260±5℃,10±1秒，脱脂棉擦拭，外观保护层＆字码没有破损 |
| Hi-Pressure Steady State<br>高压稳定状态<br>JESD22-A 102-B | 121℃，16PSIG(101KPa) 100%RH for 24Hrs.Electrical properties within spec.<br>121℃，16PSIG(101KPa) 100%RH for 24小时，电性在规格内. |
| Thermal Shock State<br>冷热冲击<br>MIL-STD-750D<br>METHOD1056.7 | -55±3℃/5min -150±3℃/5min for 10 cycles.Electrical properties within spec.<br>-55±3℃/5分钟 -150±3℃/5分钟；10循环，电性在规格内. |
| Temperature Cycle<br>温度循环<br>MIL-STD-750D<br>METHOD1051.5 | -55±3℃/30min -25±3℃/10min-150±3℃/30min-25±3℃/10min for 20 cycles.Electrical properties within spec.<br>-55±3℃/30分 -25±3℃/10分-150±3℃/30分-25±3℃/10分；20cycles(～2天)，电性在规格内. |
| Humidity Steady State<br>温度稳定状态<br>MIL-STD-202G<br>METHOD103B | 85±3℃，85%RH for 168Hrs.Electrical properties within spec.<br>85±3℃，85%RH 条件下保持168小时，电性在规格内. |
| Continue Forward<br>Operating life<br>连续操作寿命<br>MIL-STD-750D<br>METHOD1026.5 | 1F=1.1*IO.load for 1000Hrs.Electrical properties within spec.<br>1F=1.1*IO,保持1000小时，电性在规格内. |
| Inermittent Forward<br>Operating life<br>间歇操作寿命<br>MIL-STD-750D<br>METHOD1036.3 | 1F=1.5*IO.ON 5 min&OFF 5 min,load for 1000cyc.Electrical properties within spec.<br>1F=1.5*IO,开启5分种，关闭5分钟，循环1000次，电性在规格内. |
| Hi-Temperature<br>Reverse Bias<br>高温反向偏压<br>MIL-STD-750D<br>METHOD1038.4 | T=Ti(MAX),VR=80% RATED VR,load for 1000Hrs.Electrical properties within spec.<br>T=Ti(MAX),VR=80%VR 条件下，保持1000小时，电性在规格内. |
| Hi-Temperature<br>Storage Life<br>高温储存寿命测试<br>MIL-STD-750D<br>METHOD1031.5 | Ta=TstgMAX,T=168/1000hrs Electrical properties within spec.<br>Ta=TstgMAX,T=168/1000小时，电性在规格内. |

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