

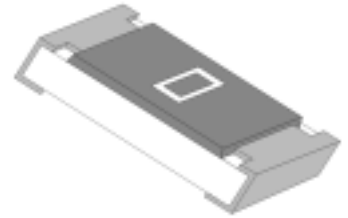


厚膜片式跨接电阻器

THICK FILM CHIP JUMPER RESISTOR

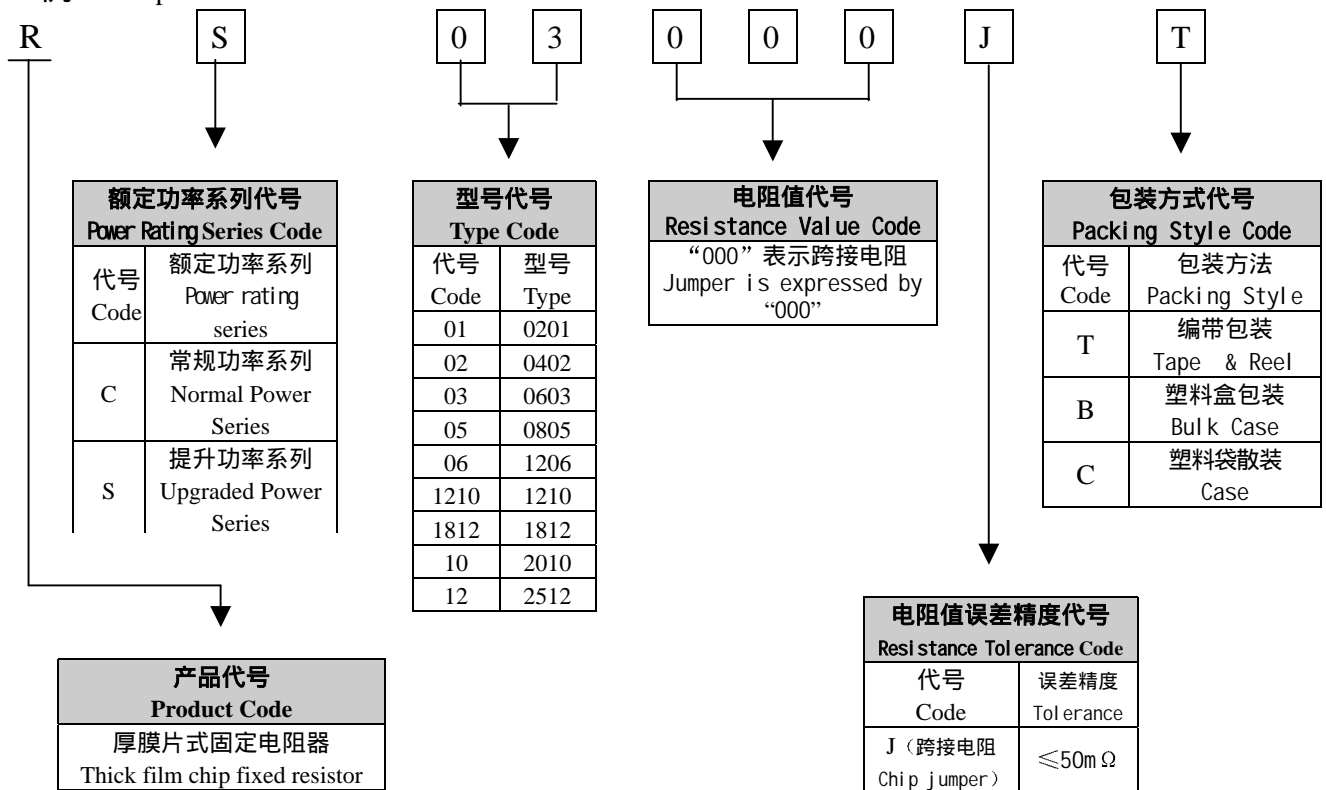
■ 特长 Features

- 体积小、重量轻。 • Miniature and light weight.
- 适应再流焊与波峰焊。 • Suit for reflow and wave flow solder.
- 电性能稳定，可靠性高。 • Stable electrical capability, high reliability.
- 装配成本低，并与自动装贴设备匹配。 • Low assembly cost, suit for automatic SMT equipment.
- 机械强度高、高频特性优越。 • Superior mechanical and frequency characteristics.
- 符合 ROHS 指令要求 • According with RoHS standard



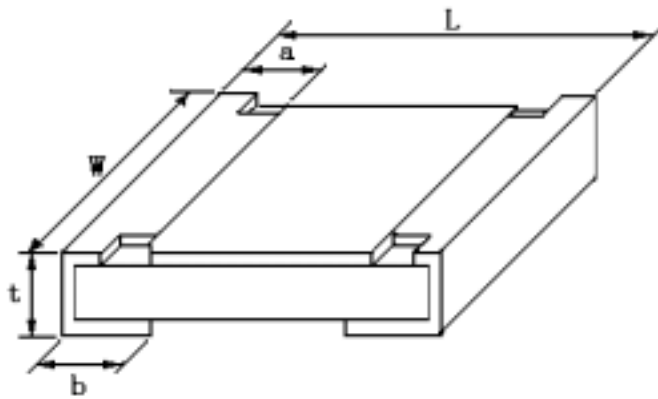
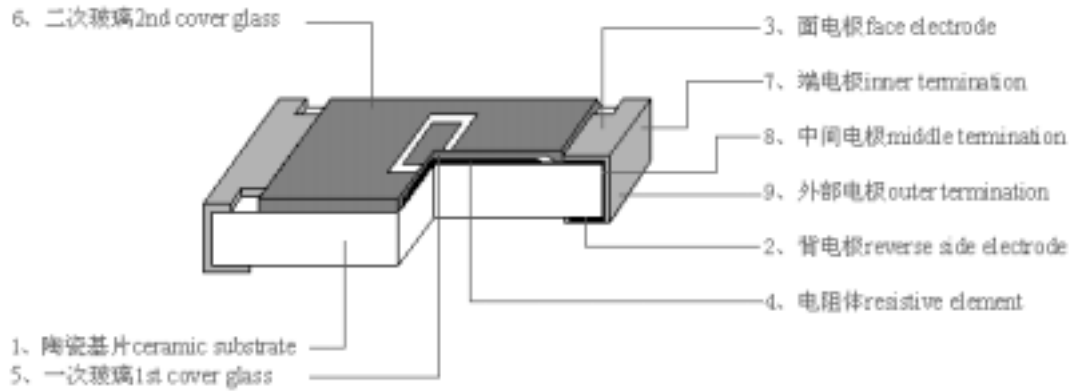
■ 品名构成 Type Designation

例 Example





■ 结构及规格尺寸 Construction and dimension



单位 Unit: mm

型号 Type	L	W	t	a	b
0201	0.60±0.05	0.30±0.05	0.23±0.05	0.10±0.05	0.15±0.05
0402	1.00±0.10	0.50±0.10	0.30±0.10	0.20±0.10	0.25±0.10
0603	1.60±0.15	0.80±0.15	0.40±0.10	0.30±0.20	0.30±0.20
0805	2.00±0.20	1.25±0.15	0.50±0.10	0.40±0.20	0.40±0.20
1206	3.20±0.20	1.60±0.15	0.55±0.10	0.50±0.20	0.50±0.20
1210	3.20±0.20	2.50±0.20	0.55±0.10	0.50±0.20	0.50±0.20
1812	4.50±0.20	3.20±0.20	0.55±0.10	0.50±0.20	0.50±0.20
2010	5.00±0.20	2.50±0.20	0.55±0.10	0.60±0.20	0.60±0.20
2512	6.40±0.20	3.20±0.20	0.55±0.10	0.60±0.20	0.60±0.20



■ 产品外观 Appearance

1. 电阻器表面二次玻璃体保护膜覆盖完好且难以脱落, 表面平整。

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

2. 电阻器引出端电极覆盖均匀、镀层较难脱落, 且平整、无裂痕、针孔、变色。

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

3. 电阻器芯片无裂痕、标志可辨。

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

■ 参考标准 Reference Standard

GB/T 5729-2003

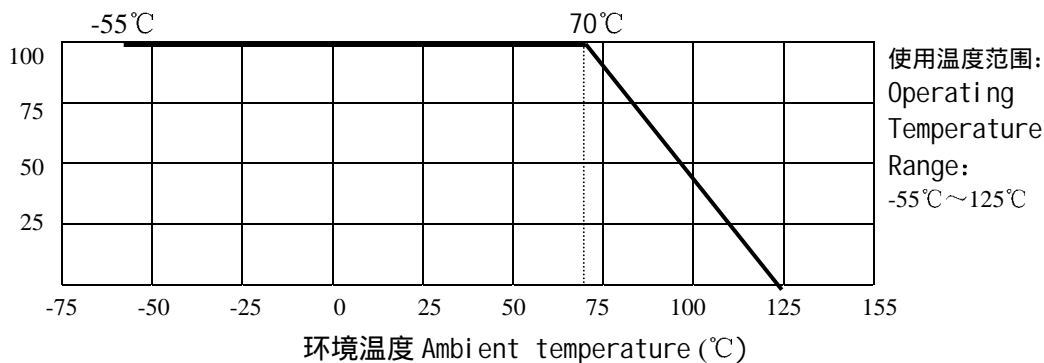
GB/T 9546-1995

JIS C 5223-1995

JIS C 5201-1998

JIS C 5202-1990

■ 负荷下降曲线 Derating Curve



当电阻使用的环境温度超过 70°C 时, 其额定负荷 (额定电流) 按上述曲线下降。

For resistors operated in ambient over 70°C, rated load (current rating) shall be derated in accordance with the above figure.

■ 额定值 Ratings

项目 Item	0201	0402	0603	0805	1206	1210	1812	2010	2512
额定电流 Rated Current	0.5A	1A	1A	2A	2A	2A	2A	2A	2A
最大过负荷电流 Max. Overload Current	1A	2A	3A	5A	5A	5A	5A	5A	5A
阻值误差精度 Resistance Tolerance	≤50mΩ								
使用温度范围 Operating Temperature Range	-55°C~+125°C								
额定温度 Rated Temperature	+70°C								



■ 特性 Characteristics

项目 Item	标准 Specifications	测试方法 (JIS C 5202 标准) Test Methods (JIS C 5202)
端头强度 Bending Strength	无可见损伤 No mechanical damage $R \leq 50m\Omega$	弯曲速度 (Speed): 1mm/s 弯曲距离 (Bending Distance): 0201、0402、0603、0805、1206、1210: 3mm; 1812、2010、2512: 1mm
温度循环 Temperature Cycling	无可见损伤 No mechanical damage $R \leq 50m\Omega$	-55°C (30 分钟) ~ 常温 (5 分钟) ~ 125°C (30 分钟) 5 个循环 -55°C (30min) ~ normal temperature (5min) ~ 125°C (30min) 5 cycles
短时间过负载 Short Time Overload	无可见损伤 No mechanical damage $R \leq 50m\Omega$	2.5 倍额定电流或最大过负荷电流 (取最小者) 保持 5 秒 2.5 × Rated Current or Max. Overload Current whichever is lower for 5 seconds
稳态湿热 Steady state humidity	无可见损伤 No mechanical damage $R \leq 100m\Omega$	40°C ± 2°C 90%~95%RH 1000 小时 40°C ± 2°C 90%~95%RH 1000h
70°C 耐久性 Load Life	无可见损伤 No mechanical damage $R \leq 100m\Omega$	70°C ± 2°C, 1000 小时, 额定电流通 1.5 小时/断 0.5 小时 70°C ± 2°C, 1000h, Rated current 1.5h on/0.5h off
上限类别温度耐久性 Endurance at upper temperature	无可见损伤 No mechanical damage $R \leq 100m\Omega$	125°C ± 2°C 1000h
耐溶剂性 Resistance to Solvent	无可见损伤 No mechanical damage $R \leq 50m\Omega$	浸入三氯乙烯 10h ± 1h Dip in chloroethylene for 10h ± 1h.
绝缘电阻 Insulation Resistance	1000MΩ Min	在电极与基片间施加 100V 直流电压, 保持 1 分钟, 然后测绝缘电阻值。 Apply DC 100V between substrate and termination for 1 minute, then check insulation resistance.
耐焊接热 Resistance to Soldering Heat	无可见损伤 No mechanical damage $R \leq 50m\Omega$	260°C ± 5°C 10s ± 1s
可焊性 Solderability	可焊面积 ≥ 95% 95% Cover Min	235°C ± 5°C 2s ± 0.5s
附着力 Adhesion	外观无可见损伤 No mechanical damage	施加力 5N 10s ± 1s Applying 5N 10s ± 1s

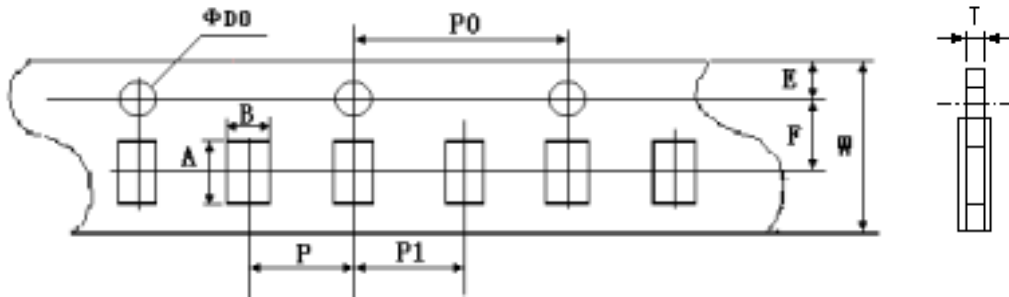


■包装 Packaging

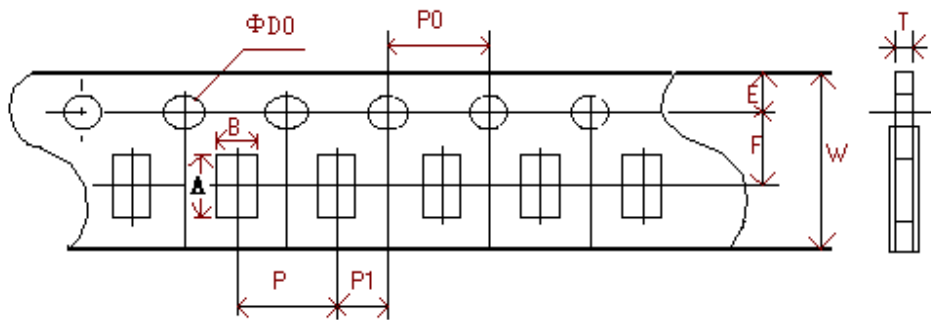
● 编带包装 Tape and reel

* 纸带编带 Paper taping

0201、0402:



0603、0805、1206、1210:



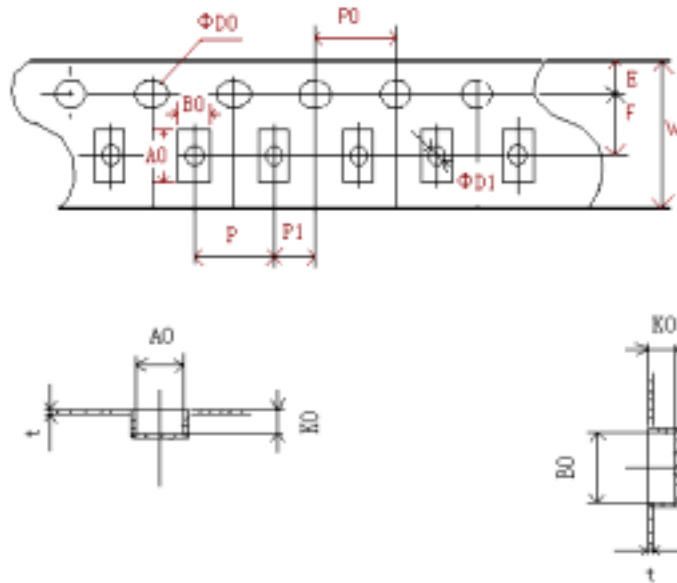
单位 unit: mm

型号 Type	A	B	W	F	E
0201	0.70±0.1	0.40±0.1	8.0±0.20	3.5±0.05	1.75±0.1
0402	1.20±0.1	0.70±0.1	8.0±0.20	3.5±0.05	1.75±0.1
0603	1.85±0.1	1.10±0.1	8.0±0.20	3.5±0.05	1.75±0.1
0805	2.35±0.1	1.65±0.1	8.0±0.20	3.5±0.05	1.75±0.1
1206	3.50±0.2	1.90±0.2	8.0±0.20	3.5±0.05	1.75±0.1
1210	3.50±0.2	2.80±0.2	8.0±0.20	3.5±0.05	1.75±0.1

型号 Type	P	P0	P1	D0	T
0201	2.0±0.05	4.0±0.1	2.0±0.05	1.5±0.1	0.5Max
0402	2.0±0.05	4.0±0.1	2.0±0.05	1.5±0.1	0.6Max
0603	4.0±0.1	4.0±0.1	2.0±0.05	1.5±0.1	0.60±0.1
0805	4.0±0.1	4.0±0.1	2.0±0.05	1.5±0.1	0.75±0.1
1206	4.0±0.1	4.0±0.1	2.0±0.05	1.5±0.1	0.75±0.1
1210	4.0±0.1	4.0±0.1	2.0±0.05	1.5±0.1	0.75±0.1



* 塑料带编带 Embossed tapping

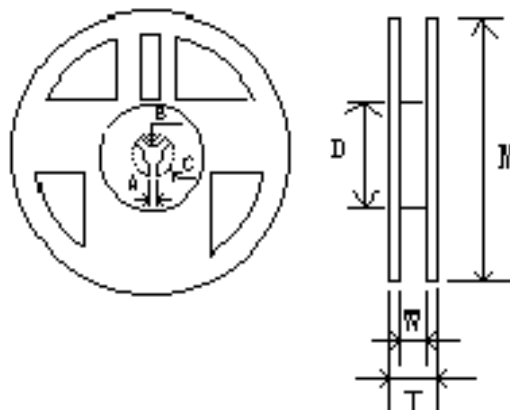


单位 unit: mm

型号 Type	A0	B0	W	F	E	t
1812	4.80±0.10	3.40±0.10	12.00±0.10	5.50±0.10	1.75±0.10	0.25±0.05
2010	5.45±0.10	2.77±0.10	12.00±0.10	5.50±0.10	1.75±0.10	0.24±0.05
2512	6.73±0.10	3.40±0.10	12.00±0.10	5.50±0.10	1.75±0.10	0.24±0.05

型号 Type	P	P0	P1	D0	D1	K0
1812	4.00±0.10	4.00±0.10	2.00±0.05	1.55±0.10	1.50±0.10	1.00±0.10
2010	4.00±0.10	4.00±0.10	2.00±0.05	1.50+0.10/-0	1.50±0.10	0.84±0.10
2512	4.00±0.10	4.00±0.10	2.00±0.05	1.50+0.10/-0	1.50±0.10	0.81±0.10

* 卷盘 Reel



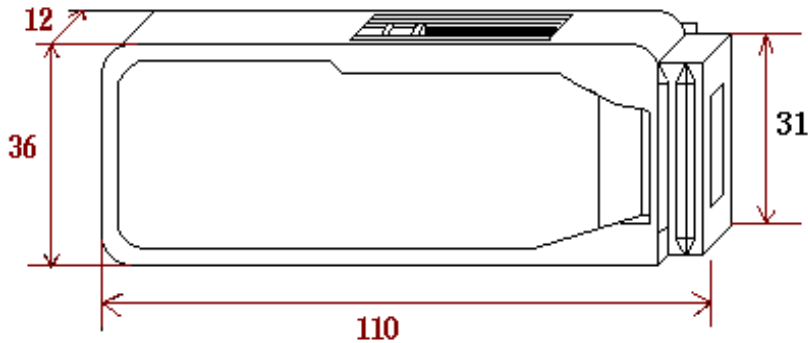


单位 unit: mm

型号 Type	M	W	T	A	B	C	D
0201	178 ±2.0	9.5 ±1.0	12.5 ±1.5	2.0 ±0.5	13.0 ±0.5	21.0 ±0.5	58.0 ±2.0
0402							
0603							
0805							
1206							
1210							
1812	178 ±2.0	13.0 ±0.5	15.5 ±1.5	2.0 ±0.5	13.0 ±0.5	21.0 ±0.5	57.0 ±2.0
2010							
2512							

●塑料盒包装 Bulk case

单位 unit: mm



●包装数量 Packaging quantity

包装方法 Packaging style	编带 Tape and reel			塑料盒 Bulk case						塑料袋散装 Bulk		
型号 Type	0201 0402	0603 0805 1206 1210	1812 2010 2512	0201 0402	0603	0805	1206	1210 2010	1812 2512	0201 0402	0603 0805 1206	1210 1812 2010 2512
数量 (PCS) Quantity	10000	5000	4000	50000	25000	10000	5000	1500	1000	≤50000	≤10000	≤4000