

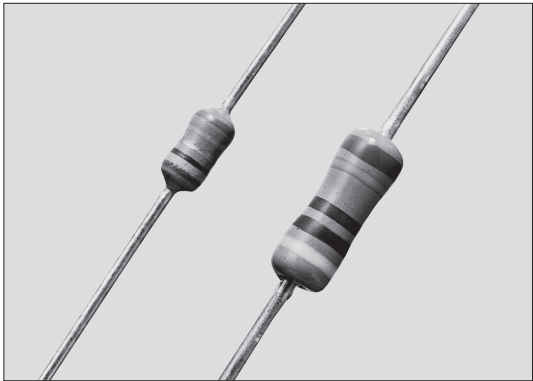
THERMAL SENSORS



LT

正温线性温度传感器

Linear Positive Temp. Coefficient Resistors



外观颜色：亮灰色 Coating color: Light gray
表示：颜色码 Marking: Color code

■ 特点 Features

- 适用于各种工业设备的温度控制。
- 可以进行各种成形加工。
- 对应欧盟RoHS。
- Suitable for temperature control in various industrial equipment.
- Various types offormings are available.
- Products meet EU-RoHS requirements.

■ 品名构成 Type Designation

实例 Example

LT	1/4	C	T52	A	102	J	0600
品种 Product Code	额定功率 Power Rating	端子表面材质 Terminal Surface Material	二次加工 Taping & Forming	包装 Packaging	公称电阻值 Nominal Resistance	阻值允许偏差 Resistance Tolerance	电阻温度系数 T.C.R. ($\times 10^{-6}/K$)
	1/6: 0.16W 1/4: 0.25W	C: SnCu	参照上述 See above table	A: AMMO包装 A: AMMO R: 卷 R: REEL	3 digits	J: $\pm 5\%$	4 digits

预知关于此产品含有的环境负荷物质详情（除EU-RoHS以外），请与我们联系。
编带细节请参考卷末附录C。

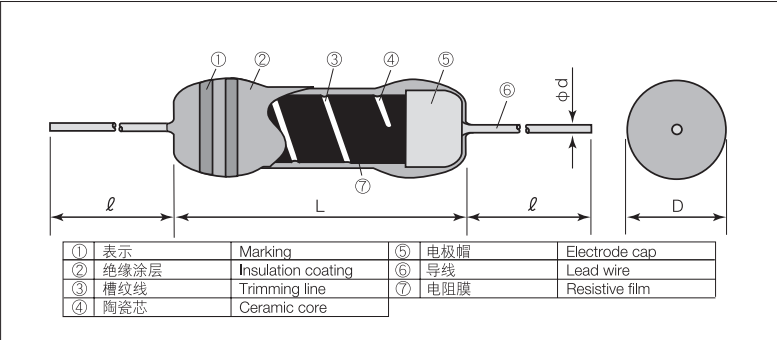
Contact us when you have control request for environmental hazardous material other than the substance specified by EU-RoHS.
For further information on taping, please refer to APPENDIX C on the back pages.

■ 额定值 Ratings

电阻温度系数 T.C.R. ($\times 10^{-6}/K$)	电阻温度系数允许偏差 T.C.R. Tolerance	电阻值范围 Resistance Range (Ω) (E24)		阻值允许偏差 Resistance Tolerance	额定环境温度 Rated Ambient Temperature	使用温度范围 Operating Temperature Range
		LT1/6	LT1/4			
1000	$\pm 15\%$	100~20k	100~39k	J: $\pm 5\%$	+70℃	-40℃~+125℃
1200						
1400						
2000	$\pm 10\%$	100~9.1k	100~15k			
3600		100~5.1k	100~6.8k			
3900		100~3.3k	100~6.2k			
4200		100~750	100~1k			
4500		100~240	100~510			

T.C.R.测定温度 T.C.R. Measuring Temperature: +25℃~+75℃
※关于上述以外的T.C.R.和电阻值，请和我们商谈
※Contact us for T.C.R. and resistance other than those above.

■ 结构图 Construction



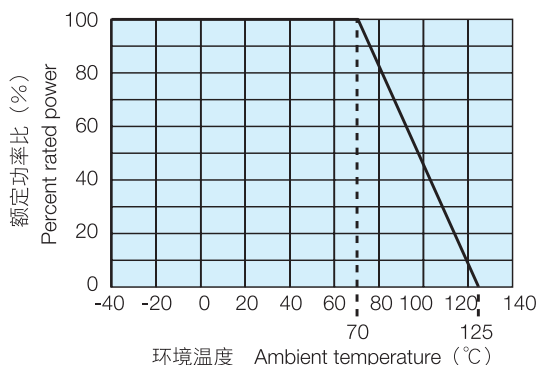
■ 外形尺寸 Dimensions

型号 Type	尺寸 Dimensions (mm)			Weight (g/1000pcs)
	L	D	d (Nominal)	
LT1/6	3.2 $\pm$ 0.2	1.7 $^{+0.2}_{-0.1}$	0.45	120
LT1/4	6.3 $\pm$ 0.5	2.3 $\pm$ 0.3	0.6	215

■ 二次加工对应表 Taping & Forming Matrix

型号 Type	轴向编带 Axial Taping		U成形 U Forming	M成形 M Forming			
	T26	T52	U	M5			M10
LT1/6C	○	○	—	M5F	M5R	M5W	—
LT1/4C	○	○	○	—	—	—	M10F M10R

■ 负荷特性曲线 Derating Curve

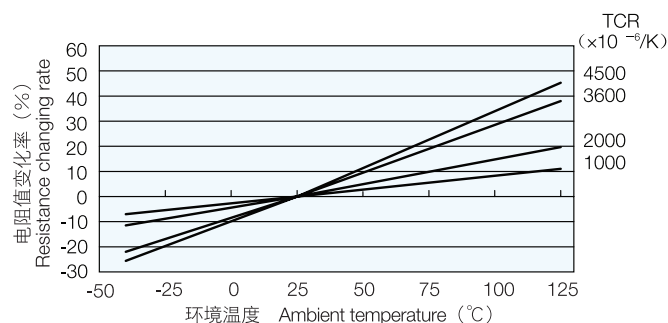


在环境温度70℃以上使用时，应按照上图负荷特性曲线，减小额定功率。

For resistors operated at an ambient temperature of 70°C or above, a power rating shall be derated in accordance with the above derating curve.

■ 电阻温度特性实例

Examples of Temperature Characteristics of Resistance



■ 电阻温度特性近似式 Approximate Expression for Resistance-Temperature Characteristics

(是代表值，不是保证值。 Values are not guaranteed but typical.)

$R_T = R_{25} (C_0 + C_1 T + C_2 T^2)$ R_T : T℃时的电阻值 R_T : Resistance value at T℃
 R_{25} : 25℃时的电阻值 R_{25} : Resistance value at 25℃
 T: 环境温度 (℃) T: Ambient temperature (℃)
 C_0, C_1, C_2 : 常数 C_0, C_1, C_2 : Constants

T.C.R. ($\times 10^{-6}/K$)	C_0	C_1	C_2
3000	0.9288	0.0028	1.9983×10^{-6}
3300	0.9232	0.0030	2.9980×10^{-6}
3600	0.9175	0.0032	4.0000×10^{-6}
3900	0.9099	0.0035	4.0064×10^{-6}

■ 性能 Performance

试验项目 Test Items	标准值 Performance Requirements $\Delta R \pm (\% + 0.05 \Omega)$		试验方法 Test Methods
	保证值 Limit	代表值 Typical	
电阻值 Resistance	在规定的允许偏差内 Within specified tolerance	—	25℃
过载 (短时间) Overload (Short time)	1	0.75	额定电压的2.5倍施加5秒钟 Rated voltage $\times 2.5$, for 5 seconds
耐焊接热 Resistance to soldering heat	1	0.75	260℃ $\pm 5^\circ\text{C}$, 10s ± 1 s
温度突变 Rapid change of temperature	1	0.75	-40℃ (30min.) / +125℃ (30min.) 5 cycles
耐湿负荷 Moisture resistance	3	2	40℃ $\pm 2^\circ\text{C}$, 90%~95%RH, 1000h 1.5小时ON、0.5小时OFF的周期 1.5h ON/0.5h OFF cycle
在70℃时的耐久性 Endurance at 70℃	3	2	70℃ $\pm 2^\circ\text{C}$, 1000h 1.5小时ON、0.5小时OFF的周期 1.5h ON/0.5h OFF cycle

■ 使用注意事项 Precautions for Use

- 焊剂等在本产品和安装的印刷电路板上附着离子性杂质时，其耐湿性・耐腐蚀性将受到影响。焊剂内有时含有氯・酸等离子性物质，为除去这些离子性物质应进行清洗。特别是使用无铅焊剂时，由于湿润性提高了，有时会含有大量离子性物质，所以在使用RMA系的焊锡或焊剂时，应充分进行清洗。并且，保管环境和安装条件、环境等，附着了汗・盐等离子性物质时，其耐湿性・耐腐蚀性也将受到影响。对于这种污染，为了除去这些离子性物质，应当进行清洗。
- Ionic impurities such as flux etc. that are attached to these products or those mounted onto a PCB, negatively affect their moisture resistance, corrosion resistance, etc. The flux may contain ionic substances like chlorine, acid, etc. Please wash them to get rid of these ionic substances especially when using lead-free solder that may contain much of the said substances for improving a wetting characteristic. Using RMA solder or RMA flux, or well-washing is needed. Also, attaching ionic substances such as perspiration, salt etc. by storage environments or mounting conditions/environments negatively affects their moisture resistance, corrosion resistance etc. Please wash them to remove the ionic substances when they are polluted.