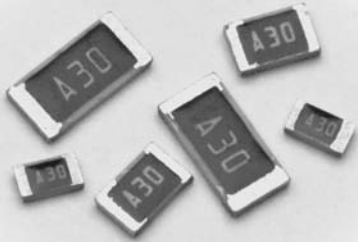


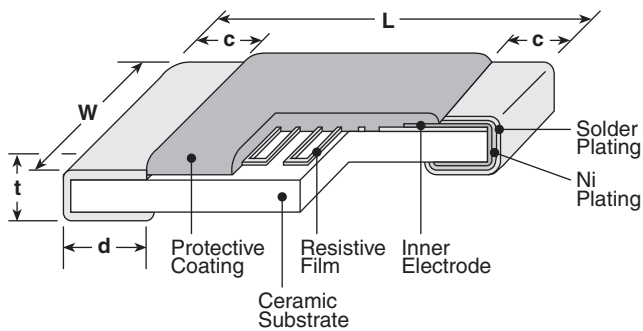
features

- Thin film thermal sensors of SMD type
- Resistance tolerance $\pm 1\%$, a wide range of TCRs $+3000 \times 10^{-6}/K \sim +5000 \times 10^{-6}/K$ with the standard products
- Suitable for control of temperatures in various industrial equipment
- Suitable for both flow and reflow soldering
- Marking: Black body color
- Products with lead-free terminations meet EU RoHS and China RoHS requirements



circuit protection

dimensions and construction



Type (Inch Size Code)	Dimensions inches (mm)				
	L	W	c	d	t
1J (0603)	.063 \pm .008 (1.6 \pm 0.2)	.031 \pm .008 (0.8 \pm 0.2)	.012 \pm .008 (0.3 \pm 0.2)	.012 \pm .008 (0.3 \pm 0.2)	.02 \pm .004 (0.5 \pm 0.1)
2A (0805)	.079 \pm .008 (2.0 \pm 0.2)	.049 \pm .008 (1.25 \pm 0.2)	.016 \pm .008 (0.4 \pm 0.2)	.016 \pm .008 (0.4 \pm 0.2)	.02 \pm .006 (0.5 \pm 0.15)
2B (1206)	.126 \pm .008 (3.2 \pm 0.2)	.063 \pm .008 (1.6 \pm 0.2)	.02 \pm .012 (0.5 \pm 0.3)	.02 \pm .012 (0.5 \pm 0.3)	.02 \pm .006 (0.5 \pm 0.15)

ordering information

New Part #	LP73	2B	T	TE	103	J	3600
	Type	Size Code	Termination Material	Packaging	Resistance Value	Tolerance	T.C.R.
		1J: 0603 2A: 0805 2B: 1206	T: Sn	TE: 4mm embossed pitch plastic (5,000 pieces/reel)	2 significant figures + 1 multiplier for $\pm 2\%$ and $\pm 5\%$ 3 significant figures + 1 multiplier for $\pm 1\%$	F: $\pm 1\%$ G: $\pm 2\%$ J: $\pm 5\%$	

For further information on packaging, please refer to Appendix A.

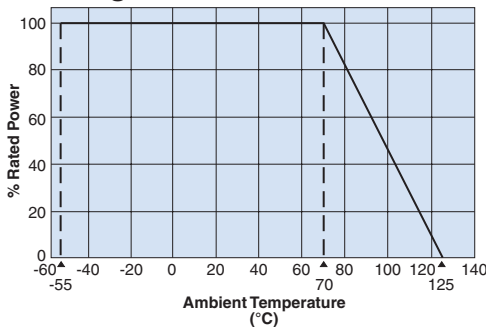
applications and ratings

Part Designation	Power Rating	Thermal Time Constant (sec.)	Thermal Dissipation Constant (mW/°C)	Rated Ambient Temp.	Operating Temp. Range	Resistance Range E-24			Resistance Tolerance	T.C.R. (ppm/°C) Max.	T.C.R. Tolerance
						LP731J	LP732A	LP732B			
LP731J	0.016W	2	1.2	+70°C	-55°C to +125°C	100Ω - 1kΩ	100Ω - 2kΩ	100Ω - 10kΩ	F: ±1% G: ±2% J: ±5%	3000	±5%
LP732A	0.031W	4	1.8							3300	
LP732B	0.063W	6.5	2.4							3600	
				4000							
				4500							
				5000							

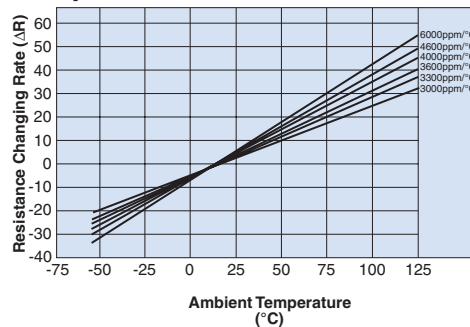
circuit protection

environmental applications

Derating Curve



Temperature Characteristics



Approximate Expression for Resistance-Temperature Characteristics

T.C.R. (x10 ⁻⁶ /K)	C ₀	C ₁	C ₂
3000	0.930587	0.00265022	3.89831 x 10 ⁻⁶
3300	0.924633	0.00292657	4.00637 x 10 ⁻⁶
3600	0.915818	0.003232524	4.34173 x 10 ⁻⁶
4000	0.907050	0.00361010	4.33462 x 10 ⁻⁶
4500	0.897412	0.00395222	6.05201 x 10 ⁻⁶
5000	0.885114	0.00436780	7.48048 x 10 ⁻⁶

(Values are not guaranteed but typical)
 $R_T = R_{25} (C_0 + C_1 T + C_2 T^2)$
 R_T : Resistance value at T°C
 R_{25} : Resistance value at 25°C
 T: Ambient temperature (°C)
 C₀, C₁, C₂: Constants

Performance Characteristics

Parameter	Requirement Δ R		Test Method
	Limit	Typical	
Resistance	Within regulated tolerance	—	25°C
T.C.R.	Within specified T.C.R.	—	+25°C/+65°C
Overload	±0.5%	±0.3%	Rated voltage x 2.5 for 5 seconds
Resistance to Solder Heat	±0.5%	±0.3%	260°C ± 5°C, 10 seconds ± 1 second
Rapid Change of Temperature	±0.5%	±0.3%	-55°C (30 minutes), +25°C (2-3 minutes), +125°C (30 minutes), +25°C (2-3 minutes), 5 cycles
Moisture Resistance	±2.0%	±1.5%	40°C ± 2°C, 90 - 95% RH, 1000 hours, 1.5 hours ON, 0.5 hours OFF cycle
Endurance at 70°C	±2.0%	±1.5%	70°C ± 2°C, 1000 hours, 1.5 hours ON, 0.5 hours OFF cycle
High Temperature Exposure	—	8 (Reference)	+125°C, 1000 hours

Specifications given herein may be changed at any time without prior notice. Please confirm technical specifications before you order and/or use.

11/20/08