

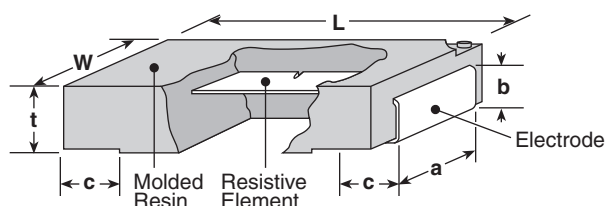
surface mount molded current sense resistor



features

- Surface mount power resistors
- Flame retardant type (UL94V0)
- Current detecting resistors for power supplies, etc.
- Metal plate terminals
- Marking: Black body color with teal marking
- Products with lead-free terminations meet EU RoHS requirements. EU RoHS regulation is not intended for Pb-glass contained in electrode, resistor element and glass.

dimensions and construction



Size Code	Dimensions inches (mm)					
	L	W	t	a	b	c
NPR1	.295±.02 (7.5±0.5)	.177±.012 (4.5±0.3)	.079±.012 (2.0±0.3)	.098±.012 (2.5±0.3)	.051±.012 (1.3±0.3)	.055±.012 (1.4±0.3)
NPR2	.472±.02 (12.0±0.5)	.315±.012 (8.0±0.3)	.157±.02 (4.0±0.5)	.157±.012 (4.0±0.3)	.118±.02 (3.0±0.5)	.059±.02 (1.5±0.5)

ordering information

New Part #	NPR	1	T	TE	100	J
Type		Power Rating	Termination Material	Packaging	Nominal Resistance	Tolerance
		1 2	T: Sn (Other termination styles may be available, please contact factory for options)	TE: Embossed plastic (1,000 pieces/reel)	±1%: 3 significant figures + 1 multiplier "R" indicates decimal point <100Ω ±5%, ±10%: 2 significant figures + 1 multiplier "R" indicates decimal point <10Ω All values <0.1Ω regardless of tolerance use "L" as decimal Ex: 91mΩ = 91L 3.9mΩ = 3L9	F: ±1% J: ±5% K: ±10%

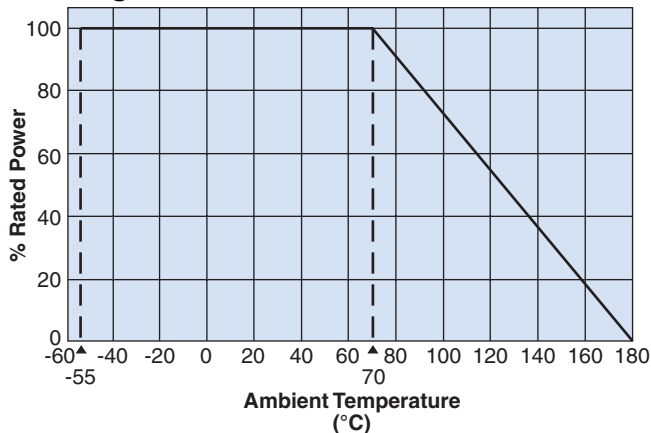
For further information on packaging, please refer to Appendix A.

applications and ratings

Part Designation	Power Rating	T.C.R. (ppm/°C) Max.	Resistance Range E-24			Absolute Maximum Working Voltage	Absolute Maximum Overload Voltage	Rated Ambient Temperature	Operating Temperature Range
			(F±1%)	(J±5%)	(K±10%)				
NPR1	1W	±100: R≥0.1Ω	0.1Ω - 10MΩ	10mΩ - 22MΩ	3.9mΩ - 9.1mΩ	350V	700V	+70°C	-55°C to +180°C
NPR2	2W	±200: R<0.1Ω				500V	1000V		

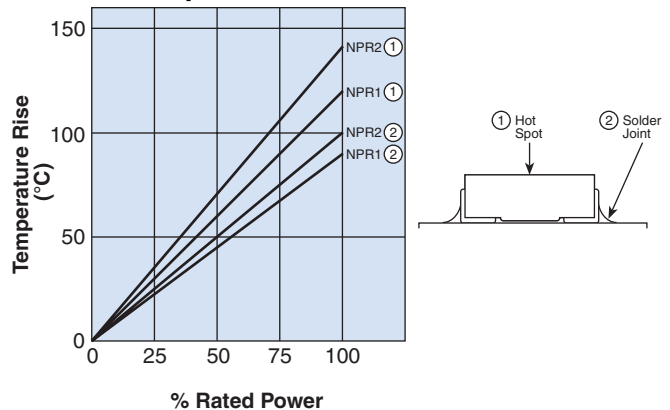
environmental applications

Derating Curve



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.

Surface Temperature Rise



Regarding the temperature rise, the value of the temperature varies per conditions and board for use since the temperature is measured under our measuring conditions.

Performance Characteristics

Parameter	Requirement $\Delta R \pm \%$		Test Method
	Limit	Typical	
Resistance	Within regulated tolerance	—	25°C
T.C.R.	Within specified T.C.R.	—	+25°C/+125°C
Overload	±1.0%	±1.0%	Rated voltage x 2.5 for 5 seconds
Resistance to Solder Heat	±1.0%	±1.0%	260°C ± 5°C, 10 seconds ± 1 second
Rapid Change of Temperature	±1.0%	±1.0%	-40°C (30 minutes), +155°C (30 minutes), 5 cycles
Moisture Resistance	±2.0%	±1.5%	40°C ± 2°C, 90 - 95% RH, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle
Endurance at 70°C	±2.0%	±0.5%	70°C ± 2°C, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle
Low Temperature Operation	±0.5%	±0.25%	-55°C, 1 hour

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