

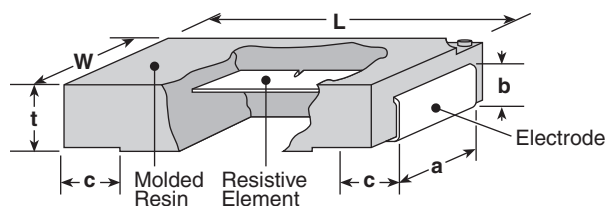
surface mount molded current sense resistor



features

- Surface mount power resistors
- Flame retardant type (UL94V0)
- Current detecting resistors for power supplies, etc.
- Metal plate terminals
- Non-wirewound structure
- Marking: Black body color with teal marking
- Products with lead-free terminations meet EU RoHS requirements. Pb located in glass material, electrode and resistor element is exempt per Annex 1, exemption 5 of EU directive 2005/95/EC

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)	NPR1- TE: 7" embossed plastic (1,000 pieces/reel) NPR2- TEB: 13" 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%

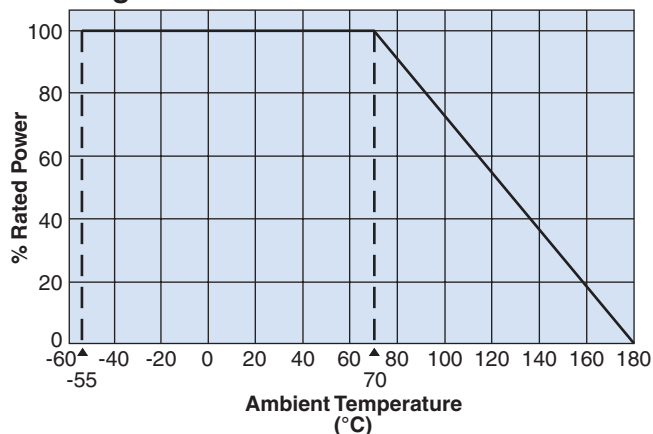
For further information on packaging, please refer to Appendix A.

applications and ratings

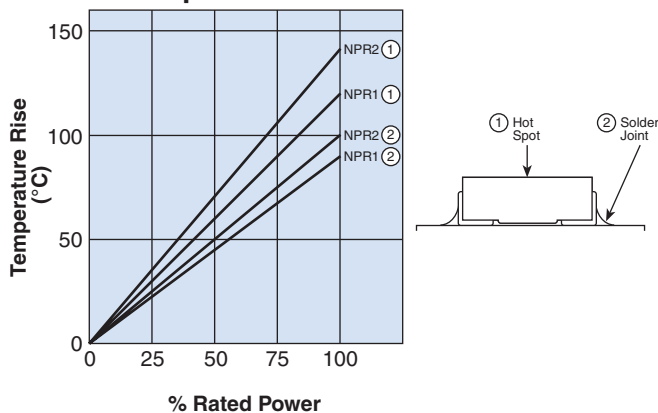
Part Designation	Power Rating	T.C.R. (ppm/°C) Max.	Resistance Range E-24			Absolute Maximum Working Voltage	Absolute Maximum Overload Voltage	Rated Ambient Temperature	Operating Temperature Range
			(F±1%)	(J±5%)	(K±10%)				
NPR1	1W	±100: R≥0.1Ω	0.1Ω - 10MΩ	10mΩ - 22MΩ	3.9mΩ - 9.1mΩ	350V	700V	+70°C	-55°C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

environmental applications

Derating Curve



Surface Temperature Rise



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/+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