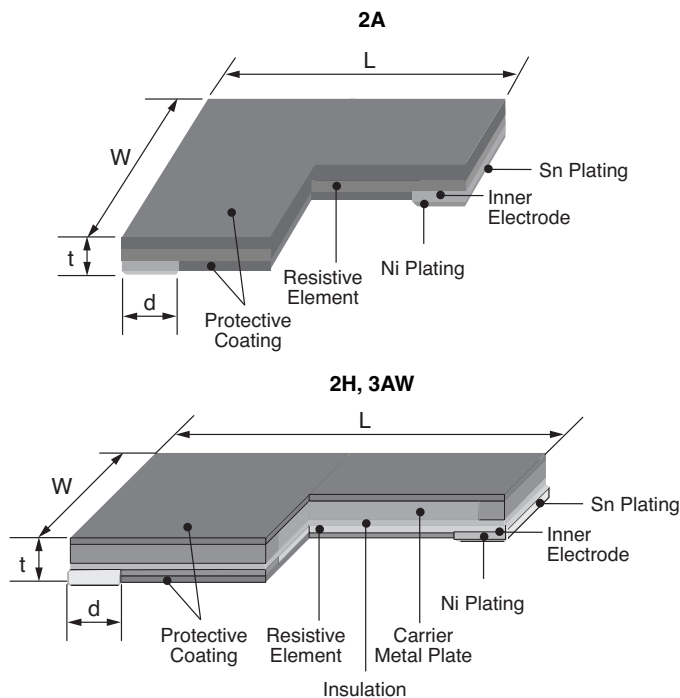


features

- SMD Type of small size, low resistance resistor for current detection
- Carrier metal plate inside, resistor of high radiation of heat structure (2H, 3AW)
- High reliability and performance with low T.C.R.
- Automatic mounting machines are applicable
- Body color: Black protective top coating, 2A: no marking; 2H, 3AW: 4 digit marking
- Suitable for reflow soldering
- Products with lead-free terminations meet EU RoHS requirements.

dimensions and construction



Size Code	Dimensions inches (mm)			
	L	W	d	t
TLRH 2A	.079±.008 (2.00±0.20)	.049±.008 (1.25±0.20)	.014±.008 (0.35±0.20)	.010±.006 (0.25±0.15)
TLRH 2H	.200±.008 (5.00±0.20)	.100±.008 (2.50±0.20)	.020±.008 (0.50±0.20)	.020±.008 (0.50±0.20)
TLRH 3AW	.248±.008 (6.30±0.20)	.126±.008 (3.20±0.20)	.030±.008 (0.75±0.20)	.020±.008 (0.50±0.20)

ordering information

New Part #	TLRH	3AW	T	TE	33L0	F
Type						
Power Rating		2A: 0.25W 2H: 1.0W 3AW: 2.0W				
Terminal Surface Material			T: Sn			
Packaging				2A: TD: 7" 4mm pitch punched paper 2H, 3AW: TE: 7" punched plastic		
Nominal Resistance					F: 4 digits Example 33L0: 33mΩ R100: 100mΩ 2A: no marking	
Tolerance						F: ±1%

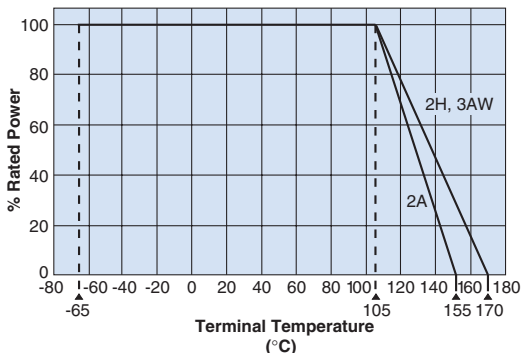
For further information on packaging, please refer to Appendix A.

applications and ratings

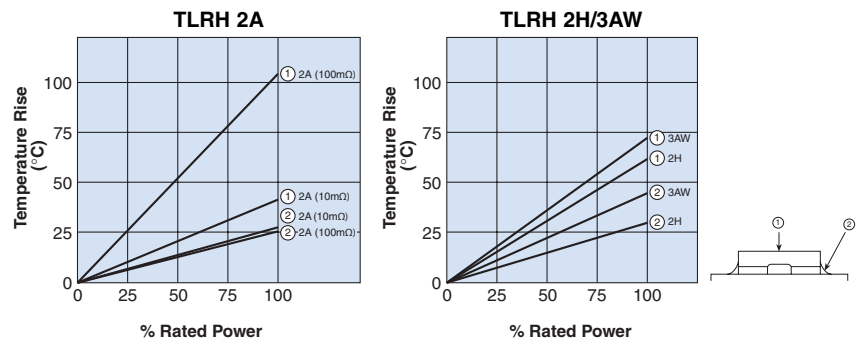
Part Designation	Power Rating	T.C.R. (x10 ⁻⁶ /K)	Resistance Range (Ω) F: ±1% (E12)	Terminal Temp. Under a Rated Load	Operating Temperature Range
TLRH 2A	0.25W	±75	10m~100m	+105°C and less	-65°C~+155°C
TLRH 2H	1.0W	±50	33m~250m		-65°C~+170°C
TLRH 3AW	2.0W	±50	22m~150m		

environmental applications

Derating Curve



Temperature Rise



Performance Characteristics

Parameter	Requirement Δ R%		Test Method
	Limit	Typical	
Resistance	Within specified tolerance	—	25°C
T.C.R.	Within specified T.C.R.	—	+25°C/+100°C
Overload (Short time)	±0.5%	2A: ±0.01% 3AW,2H: ±0.2%	2A, 3AW: Rated voltage x 2.5 for 5 seconds 2H: Rated voltage x 5 for 5 seconds
Resistance to soldering heat	±0.5%	±0.1%	260°C ±5°C, 10 seconds ~ 12 seconds
Rapid change of temperature	±0.5%	2A: ±0.2% 3AW,2H: ±0.1%	-55°C (15min.)/+150°C (15min.) 1000 cycles
Moisture resistance	±0.5%	±0.1%	85°C ±2°C, 85% RH, 1000 hours, 10% Bias
Endurance at 105°C and less of terminal temperature	±1%	2A: ±0.2% 3AW,2H: ±0.3%	Terminal temp.: 105°C, 1000 hours, 1.5 hours ON/0.5 hour OFF cycle
Low Temperature Exposure	±0.5%	2A: ±0.05% 3AW,2H: ±0.02%	-65°C, 96 hours
High Temperature Exposure	±1%	2A: ±0.5% 3AW,2H: ±0.2%	2A: +155°C, 1000 hours 3AW, 2H: +170°C, 1000 hours