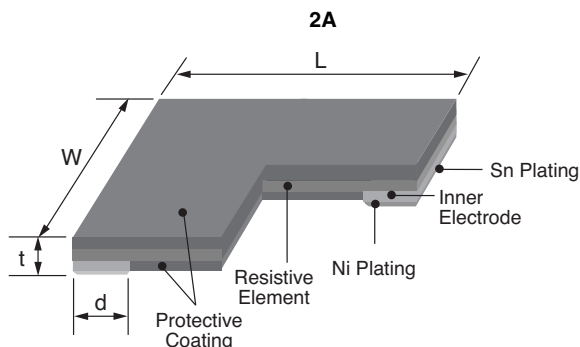


features

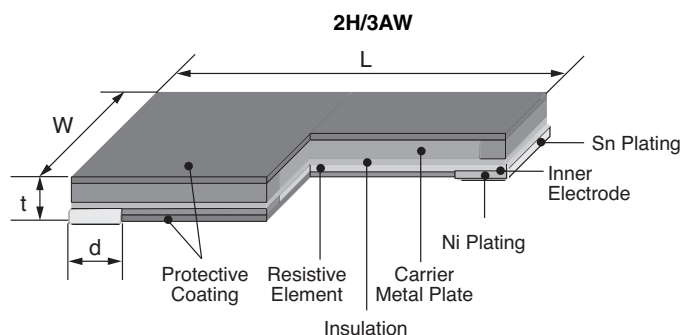
- SMD Type of small size, low resistance resistor for current detection
- Carrier metal plate inside, resistor of high radiation of heat structure (3AW)
- High reliability and performance with low T.C.R.
- Automatic mounting machines are applicable
- Body color: Black protective top coating,
2A: no marking; 3AW: 4 digit marking
- Products with lead-free terminations meet EU RoHS requirements.
- AEC-Q200 Qualified

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 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)
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)

UNDER DEVELOP



ordering information

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

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

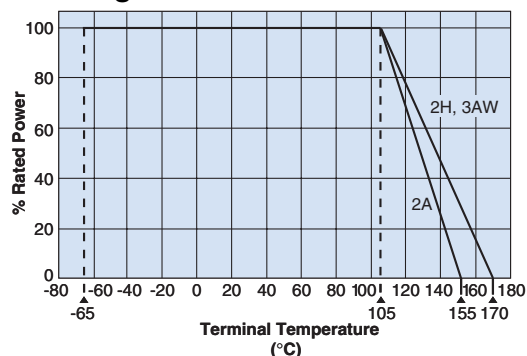
applications and ratings

Part Designation	Power Rating	T.C.R. ($\times 10^{-6}/K$)	Resistance Range (Ω) F: $\pm 1\%$ (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 ± 75	24m~270m 10m~22m		

UNDER
DEVELOP.

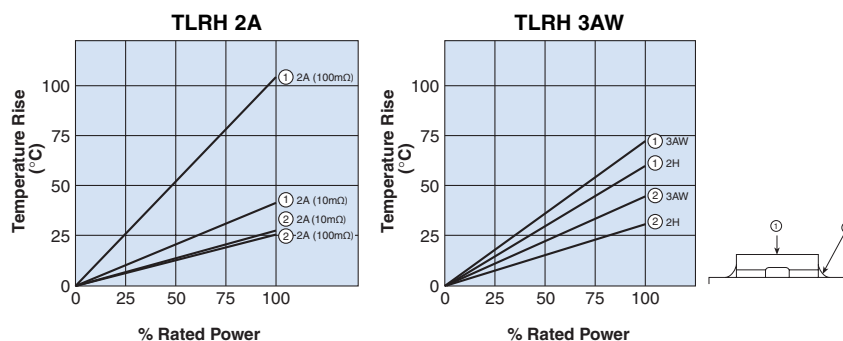
environmental applications

Derating Curve



For resistors operated at a terminal temperature of 105°C or above, a power rating shall be derated in accordance with the above derating curve.

Temperature Rise



Performance Characteristics

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