

resistors



NEW

TLRH

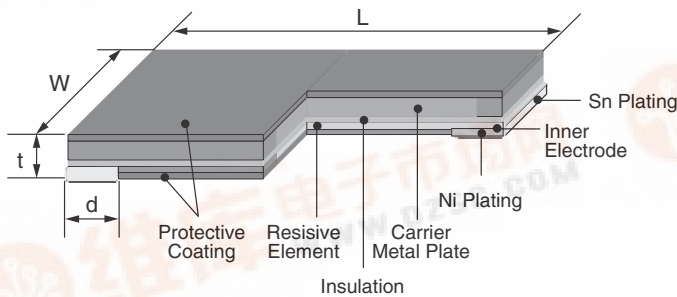
metal plate chip type low resistance resistors

EU
RoHS
COMPLIANT

features

- SMD Type of small size, low resistance (22mΩ~) resistor for current detection
- Carrier metal plate inside, resistor of high radiation of heat structure
- High reliability and performance with T.C.R. $\pm 50 \times 10^{-6}/K$
- Automatic mounting machines are applicable
- Body color: Black

dimensions and construction



Size Code	Dimensions inches (mm)			
	L	W	d	t
TLRH 2H	5.0±0.2	2.5±0.2	0.5±0.2	0.5±0.2
TLRH 3AW	6.3±0.2	3.2±0.2	0.75±0.2	0.5±0.2

NEW
ordering information

New Part #	TLRH	3AW	T	TE	33L0	F
Product Code		Power Rating	Terminal Material	Packaging	Nominal Resistance	Tolerance
		2H: 1.0W 3AW: 2.0W	T: Sn	TE: 7" embossed plastic 2H 3AW	F: 4 digits Example 33L0: 33mΩ R100: 100mΩ	F: ±1%

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



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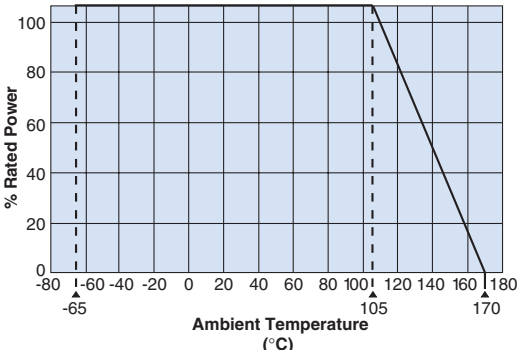
resistors

applications and ratings

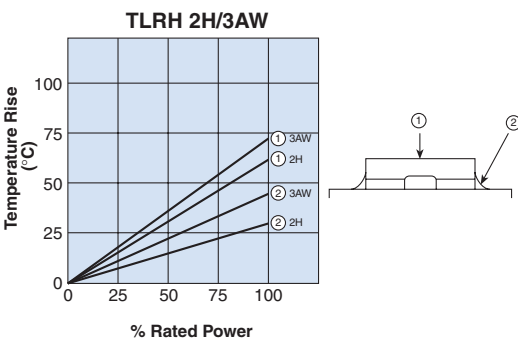
Part Designation	Power Rating	T.C.R. ($\times 10^{-6}/K$)	Resistance Range (Ω) F: $\pm 1\%$ (E12)	Terminal Temp. Under a Rated Load	Operating Temp. Range	Taping & Q'ty/Reel (pcs) TE
TLRH 2H	1.0W	± 50	33m~250m	+105°C and less	-65°C~+170°C	4,000
TLRH 3AW	2.0W	± 50	22m~150m			2,000

environmental applications

Derating Curve



Temperature Rise



Performance Characteristics

Parameter	Requirement ΔR		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)	$\pm 0.5\%$	$\pm 0.2\%$	Rated voltage x 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	$\pm 0.5\%$	$\pm 0.1\%$	-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	$\pm 1\%$	$\pm 0.3\%$	Terminal temp.: 105°C, 1000 hours, 1.5 hours ON/0.5 hour OFF cycle
Low Temperature Exposure	$\pm 0.5\%$	$\pm 0.02\%$	-65°C, 96 hours
High Temperature Exposure	$\pm 1\%$	$\pm 0.2\%$	+170°C, 1000 hours