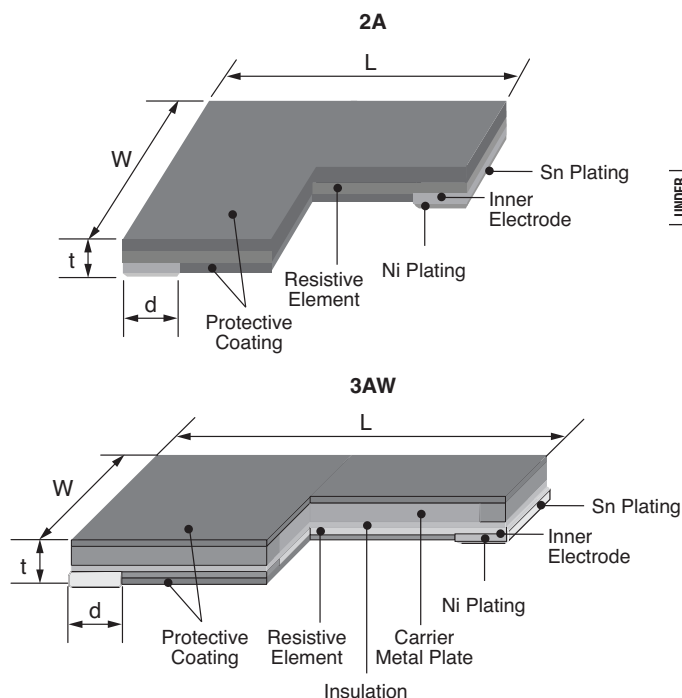


features

- 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
- 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 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 | | 2A: 0.25W 3AW: 2.0W | | | | |
| Terminal Surface Material | | | T: Sn | | | |
| Packaging | | | | 2A: TD: 7" 4mm pitch punched paper 3AW: TE: 7" punched plastic | | |
| Nominal Resistance | | | | | F: 4 digits Example 33L0: 33mΩ R100: 100mΩ 2A: no marking | |
| Tolerance | | | | | | F: ±1% |

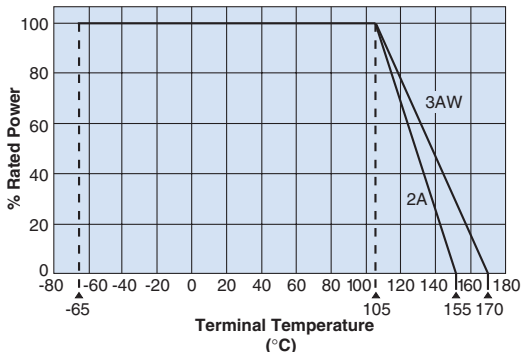
For further information on packaging, please refer to Appendix A.

applications and ratings

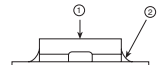
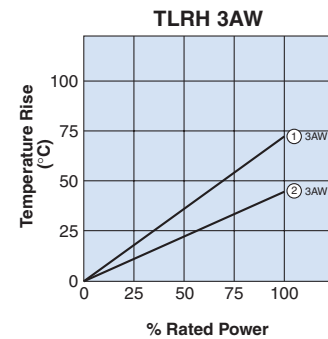
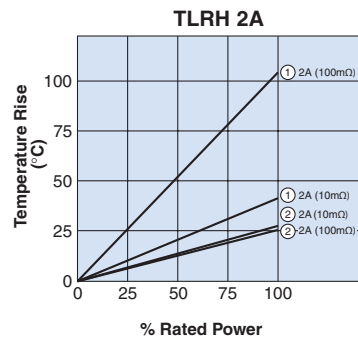
| Part Designation | Power Rating | T.C.R. (x10 ⁻⁶ /K) | Resistance Range (Ω) F: ±1% (E12) | Terminal Temp. Under a Rated Load | Operating Temperature Range |
|------------------|--------------|-------------------------------|--------------------------------------|-----------------------------------|-----------------------------|
| 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 | 24m~150m | | 10m~22m |
| | | ±75 | 10m~22m | | |

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: ±0.2% | 2A, 3AW: Rated power x 2.5 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: ±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: ±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: ±0.02% | -65°C, 96 hours |
| High Temperature Exposure | ±1% | 2A: ±0.5% 3AW: ±0.2% | 2A: +155°C, 1000 hours 3AW: +170°C, 1000 hours |