KOA SPEER ELECTRONICS, INC.

# SLN3

## Surface mount molded current sense resistor

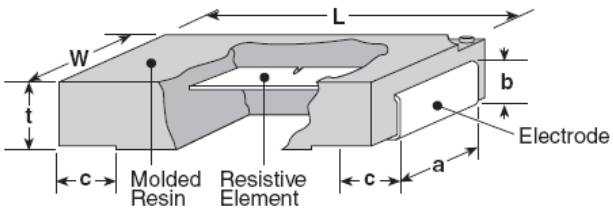
TS-16949 ISO 9001:2008 3-2015 RoHS COMPLIANT

# Type SLN3- 3Watt current sense resistor

## 1. General

- Power Rating: 3.0W Molded Current Sense Resistor
- AEC-Q200 Qualified
- Flameproof UL94V0 molded polymer case
- Excellent dimension accuracy, mountability and shock resistance
- Product meets EU RoHS requirements

## 2. Dimensions




| Size Code | L (mm) | W (mm) | t (mm) | a (mm) | b (mm) | c (mm) |
|---|---|---|---|---|---|---|
| SLN3 (4528) | 11.5±0.3 | 7.0±0.2 | 2.4±0.2 | 5.5±0.2 | 1.6±0.2 | 2.55±0.3 |

## 3. Type Designations*

| SLN | 3 | T | TED | 30L0 | F |
|---|---|---|---|---|---|
| Type | Size | Termination | Packaging | Nominal Resistance | Tolerance |
| | 3Watt | T: Sn | TED: embossed plastic (1,000 pieces/reel) | 30L0:30mΩ | D:±0.5%<br>F: ±1%<br>J:±5% |

## 4. Ratings

| Part Designation | Power Rating @70°C | T.C.R. (ppm/°C) Max. | Nominal Resistance (Ω) | Resistance Tolerance | Operating Temperature Range |
|---|---|---|---|---|---|
| SLN3 | 3W | +110:R<10mΩ<br>+75:R=>10mΩ | 5mΩ ~ 110mΩ | D: ±0.5%<br>F: ±1%<br>J:±5% | -55°C to + 180°C |

*Please note: KOA's Part Numbers Do Not Contain any Space or Hyphens.

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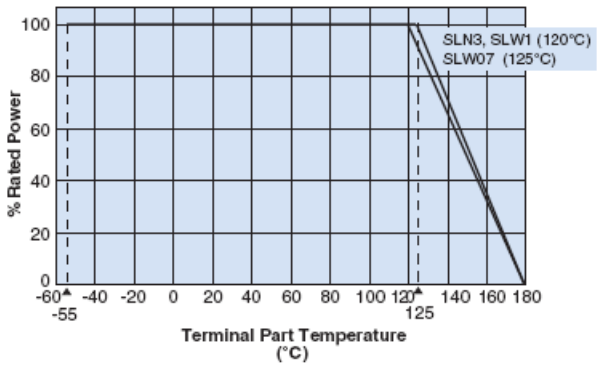
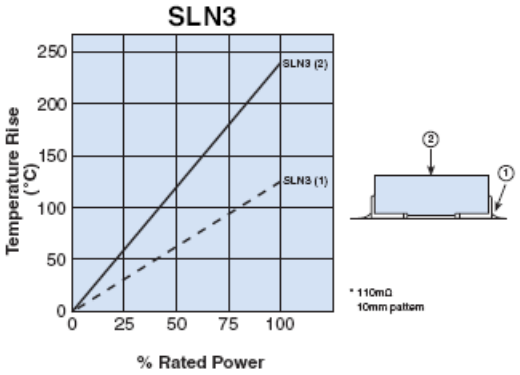
## 5. Power Derating Curve

For resistors operated at a terminal part temperature of described for each size or above, a power rating shall be derated in accordance with the derating curve below:




## 6. Surface Temperature Rise




## 7. Performance Characteristics

| Parameter | Requirement Δ R ±% Limit | Typical | Test Method |
|---|---|---|---|
| Resistance | Within specified tolerance | — | 25°C |
| T.C.R. | Within specified T.C.R. | — | +25°C/+125°C |
| Overload (Short time) | ±1%: SLW07, SLW1<br>±0.5%: SLN3 | ±1%: SLW07, SLW1<br>±0.25%: SLN3 | SLW07: Rated power x 3 for 5 seconds, SLW1: Rated power x 5 for 5 seconds, SLN3: Rated power x 10 for 5 seconds, |
| Resistance to Solder Heat | ±1%: SLW07, SLW1 | ±1%: SLW07, SLW1 | 260°C ± 5°C, 10 ± 1 second |
| | ±0.5%: SLN3 | ±0.5%: SLN3 | 260°C ± 5°C, 10~12 seconds |
| Rapid Change of Temperature | ±1%: SLW07, SLW1 | ±0.5%: SLW07, SLW1 | -55°C (30 minutes), +150°C (30 minutes), 100 cycles |
| | ±0.5%: SLN3 | ±0.25%: SLN3 | -55°C (15 minutes), +150°C (15 minutes), 1000 cycles |
| Moisture Resistance | ±2%: SLW07, SLW1 | ±0.5%: SLW07, SLW1 | 40°C ± 2°C, 90%~95%RH, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle |
| | ±0.5%: SLN3 | ±0.35%: SLN3 | 85°C ± 2°C, 85% RH, 1000 hours, Rated power x 0.3 |
| Endurance of Rated Terminal Part Temperature | ±2% | ±1% | Terminal part temperature: 125°C (SLW07), 120 °C (SLW1, SLN3), 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle |
| Low Temperature Exposure | ±0.5% | ±0.25% | SLW07, SLW1: -55°C, 1 hour; SLN3: -65°C, 24 hours |

*Please note: KOA's Part Numbers Do Not Contain any Space or Hyphens.

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