

KAL Series

Aluminum Housed Surface Mount Resistor

Stackpole Electronics, Inc.

Resistive Product Solutions

- Features:
- Aluminum housing for maximum heat dissipation
 - Complete welded construction
 - 10-50W tinned copper terminals
 - Centerless ground steatite or alumina cores
 - Molded epoxy body for heat transfer
 - Non-inductive winding available (NKAL)
 - 100–250W threaded terminals
 - RoHS compliant / lead-free

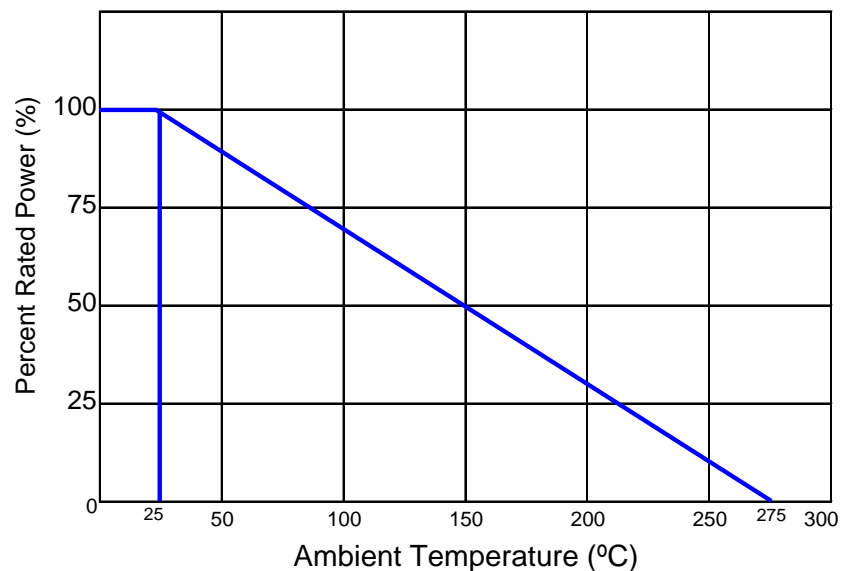


| Electrical Specifications | | | | | | | | |
|---------------------------|---------------|-----------------------------|------|---------------------------------|-------------------------------|-----------|--------------|----|
| Type / Code | MIL-R-26 Ref. | Power Rating (Watts @ 25°C) | | Dielectric Withstanding Voltage | Ohmic Range (Ω) and Tolerance | | | |
| | | Commercial | MIL | | 0.1% | 0.5% | 1% | 3% |
| KAL10 | RE-65 | 12.5W | 10W | 1,000 VAC | 1 - 1K | 1 - 1K | 0.05 - 30K | |
| KAL25 | RE-70 | 25W | 20W | 3,000 VAC | | | 0.05 - 51.1K | |
| KAL50 | RE-75 | 50W | 30W | | | | 0.05 - 150K | |
| KAL100 | RE-77 | 100W | 75W | 2,500 VAC | - | 0.4 - 50K | 0.4 - 50K | |
| KAL250 | RE-80 | 250W | 120W | | | - | 0.6 - 80K | |

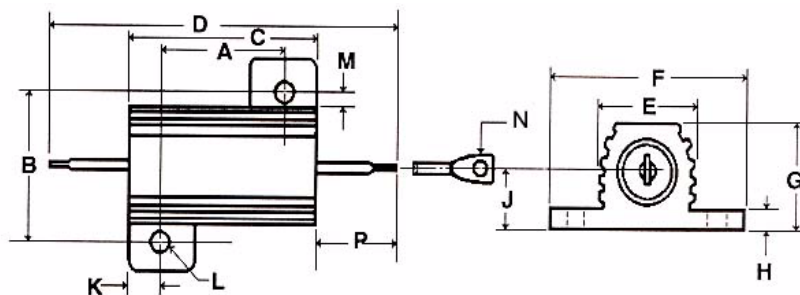
Temperature Coefficient Standard: ±100ppm below 0.1Ω, ±50ppm from 0.1Ω - 9.9Ω, ±30ppm from 10Ω - 49Ω, & ±20ppm above 50Ω

| Performance Characteristics | | |
|-----------------------------|--|---|
| Test | Test Conditions | Results |
| Short time Overload | 5x wattage rating - 5 seconds | $\Delta R \pm (0.5\% + 0.05\Omega)$ MAX |
| Moisture resistance | Temp 40°C moisture 95% CDC 100V for 500 hours | $\Delta R \pm (0.5\% + 0.05\Omega)$ MAX |
| Load life | Load rating (chassis is mounted) 1.5 hours ON, 0.5 hours OFF. Repeated for 1000 hours | $\Delta R \pm (1.5\% + 0.05\Omega)$ MAX |

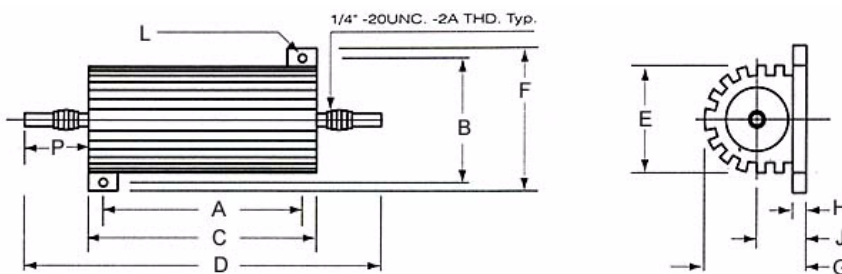
Power Derating Curve:



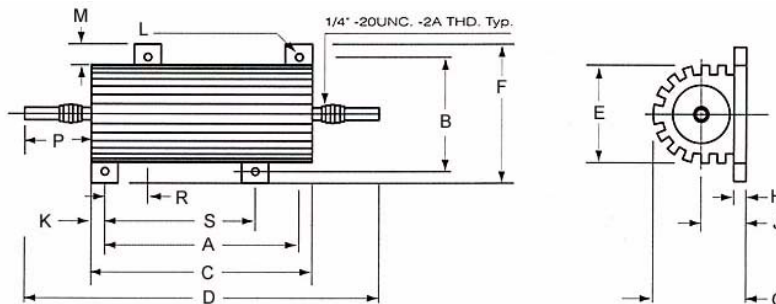
KAL 10-50



KAL 100

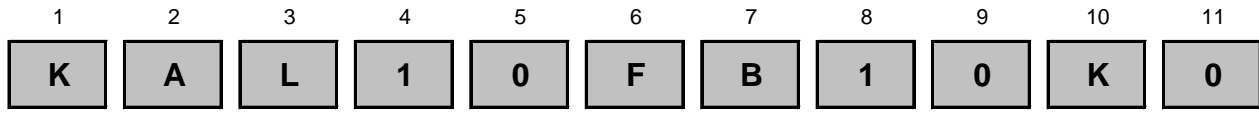


KAL 250



| Mechanical Specifications | | | | | | | | | | | | | | | | | |
|---------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|
| Type | A | B | C | D | E | F | G | H | J | K | L | M | N | P | R | S | Unit |
| Tolerance | ±0.005 ±0.10 | ±0.005 ±0.10 | ±0.031 ±0.80 | ±0.062 ±1.60 | ±0.015 ±0.40 | ±0.015 ±0.40 | ±0.031 ±0.80 | ±0.010 ±0.30 | ±0.015 ±0.40 | ±0.010 ±0.30 | ±0.005 ±0.10 | ±0.015 ±0.40 | ±0.005 ±0.10 | ±0.062 ±1.60 | ±0.010 ±0.25 | ±0.010 ±0.25 | inches mm |
| KAL10 | 0.562 14.27 | 0.625 15.88 | 0.750 19.05 | 1.375 34.93 | 0.420 10.67 | 0.800 20.32 | 0.390 9.91 | 0.075 1.91 | 0.190 4.83 | 0.093 2.36 | 0.093 2.36 | 0.102 2.59 | 0.086 2.18 | 0.312 7.92 | - | - | inches mm |
| KAL25 | 0.719 18.26 | 0.781 19.84 | 1.062 26.97 | 1.938 49.23 | 0.550 13.97 | 1.080 27.43 | 0.546 13.87 | 0.088 2.24 | 0.260 6.60 | 0.172 4.37 | 0.125 3.18 | 0.115 2.92 | 0.086 2.18 | 0.438 11.13 | - | - | inches mm |
| KAL50 | 1.563 39.70 | 0.844 21.44 | 1.968 49.99 | 2.781 70.64 | 0.630 16.00 | 1.140 28.96 | 0.610 15.49 | 0.088 2.24 | 0.300 7.62 | 0.196 4.98 | 0.125 3.18 | 0.107 2.72 | 0.086 2.18 | 0.410 10.41 | - | - | inches mm |
| KAL100 | 2.750 69.85 | 2.250 57.15 | 3.500 88.90 | 5.480 139.19 | 1.890 48.01 | 2.810 71.37 | 2.180 55.37 | 0.190 4.83 | 0.960 24.38 | 0.370 9.40 | 0.190 4.83 | 0.290 7.37 | - | 0.990 25.15 | - | - | inches mm |
| KAL250 | 3.870 98.30 | 2.500 63.50 | 4.500 114.30 | 7.000 177.80 | 2.130 54.10 | 3.000 76.20 | 2.190 55.63 | 0.250 6.35 | 0.960 24.38 | 0.310 7.87 | 0.190 4.83 | 0.250 6.35 | - | 1.250 31.75 | 0.870 22.10 | 3.000 76.20 | inches mm |

How to Order



| Product Series | | Size | Power | Tolerance | | Packaging | | | | Resistance Value |
|----------------|---------------|------|-------|-----------|------|-----------|-------------|------|-----|--|
| Code | Description | | | Code | Tol | Code | Description | Size | MOQ | |
| KAL | Standard | 10 | 10W | B | 0.1% | B | Bulk | 10 | 250 | Four characters with the multiplier used as the decimal holder. 10.2 Kohm = 10K2 1 Mohm = 1M00 |
| NKAL | Non-inductive | 25 | 25W | D | 0.5% | | | 25 | 250 | |
| | | 50 | 50W | F | 1% | | | 50 | 250 | |
| | | 100 | 100W | H | 3% | | | 100 | 60 | |
| | | 250 | 250W | J | 5% | | | 250 | 30 | |

Legacy Part Number (before January 3, 2011):

| SEI Type | | Code | | Nominal Resistance | Tolerance | Packaging | | | | |
|----------|---------------|------|---------|--------------------|-----------|-----------|--------|-----|-------------|------|
| KAL | | 10 | | 10K | 1% | B | | | | |
| Type | Description | Code | Wattage | | | Tolerance | Types | MOQ | Description | Code |
| KAL | Standard | 10 | 10W | | | 0.1% | KAL10 | 250 | Bulk | B |
| NKAL | Non-Inductive | 25 | 25W | | | 0.5% | KAL25 | 250 | | |
| | | 50 | 50W | | | 1% | KAL50 | 250 | | |
| | | 100 | 100W | | | 3% | KAL100 | 60 | | |
| | | 250 | 250W | | | 5% | KAL250 | 30 | | |