# T0-220 POWER RESISTOR
# - RTR50 SERIES -

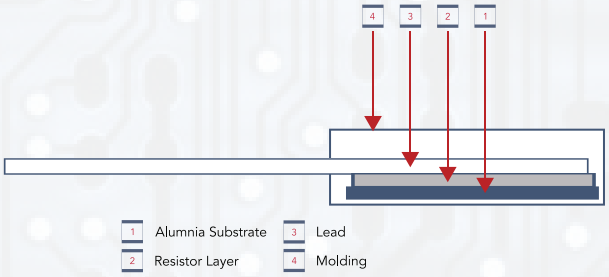

## FEATURES

- 50 Watts at 25°C case temperature heat sink mounted
- T0-220 style power package
- Molded case for protection and easy to mount
- Electrically isolated case
- Non-Inductive design

## APPLICATIONS

- Switching Power Supplies
- Non-Inductive Design for High Frequency
- Pulsing Applications
- UPS
- Voltage Regluation

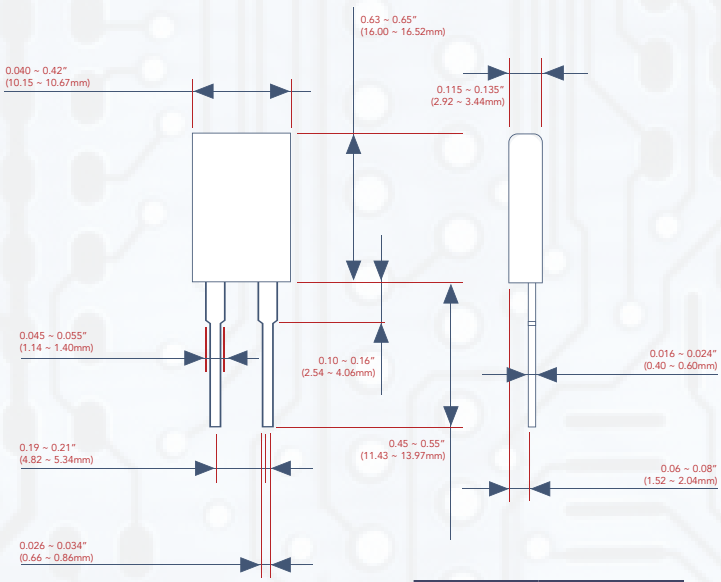
## CONSTRUCTION




## PART NUMBERING

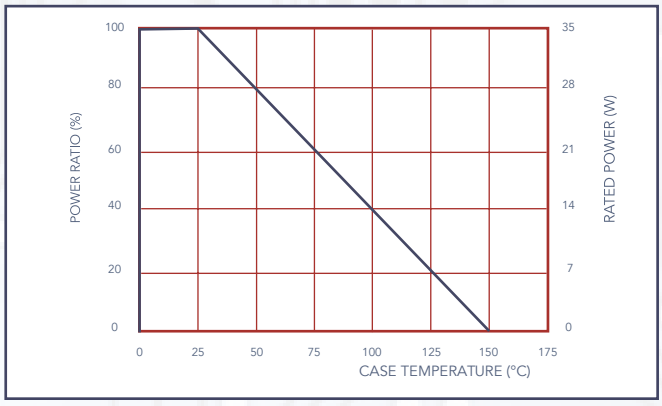
| RTR | 50 | J | 1001 | B | 50 |
|---|---|---|---|---|---|
| PRODUCT TYPE | POWER | RESISTANCE TOLERANE | RESISTANCE | PACKING CODE | TCR (PPM / °C) |
| | 50: 50 Watts | D: ±0.5%<br>F: ±1%<br>J: ±5%<br>K: ±10% | R100: 0.1Ω<br>0100: 10Ω<br>4700: 470Ω<br>1001: 1KΩ<br>1002: 10KΩ | B: Bulk | 50: ±50<br>100: ±100<br>200: ±200<br>300: ±300 |

## DIMENSIONS




| TYPE | WEIGHT (G) (1000 PCS) |
|---|---|
| RTR50 | 1290 |

## DERATING CURVE




Cal-Chip Electronics Inc.
59 Steamwhistle Drive, Ivyland, PA 18974 | p. 215.942.8900 | www.calchip.com | quotes@calchip.com

MS LEVEL 1

## ELECTRICAL CHARACTERISTICS SPECIFICATIONS

| TYPE \ ITEM | RESISTANCE RANGE | | | | TCR (PPM/°C) |
|---|---|---|---|---|---|
| | ±0.5% | ±1% | ±5% | ±10% | |
| RTR50 | - | - | 0.01Ω - 1Ω | | Not Specified |
| | - | ≥ 1Ω - 3Ω | | | ± 300 |
| | - | ≥ 3Ω - 10Ω | | | ±100 \| ±200 |
| | ≥ 10Ω - 10KΩ | | | | ±50 \| ±100 \| ±200 |

- Operating Voltage: 350V Max
- Dielectric Strength: 1800VAC
- Insulation Resistance: 10GΩ min.
- Working Temperature Range: -65°C to +150°C
- Resistance Value <1Ω is available

## ENVIRONMENTAL CHARACTERISTICS

| ITEM | REQUIREMENT | TEST METHOD |
|---|---|---|
| Temperature Coefficient of Resistance (T.C.R.) | As Spec. | Referenced to 25°C, ΔR taken at +105°C |
| Short Time Overload | ΔR ± 0.3% | 2 times rated power with applied voltage not to exceed 1.5 times maximum continuous operating voltage for 5 seconds |
| Load Life | ΔR ± 1.0% | 2,000 hours at rated power |
| Damp Heat with Load | ΔR ± 0.5% | 40±2°C, 90~95% R.H., RCWV for 1000 hrs with 1.5 hrs "ON" and 0.5 hrs "OFF" |
| Solderability | 90% min coverage | 245±5°C for 3 seconds |
| Thermal Shock | ΔR ± 0.3% | -65°C ~150°C, 100 cycles |
| Terminal Strength | ΔR ± 0.2% | (Pull Test) 2.4N |
| Vibration, High Frequency | ΔR ± 0.2% | 20g peak |

RCWV (Rated Continuous Working Voltage) $-\sqrt{(P*R)}$ or Max. Operating Voltage whichever is lower.

- Lead Material: Tinned Copper
- Without a Heat Sink, when in Free Air at 25°C, the RTR50 is Rated for 2.50W.
- The Case Temperature is to be used for the Definition of the Applied Power Limit.
- The Case Temperature Measurement Must be Made with a Thermocouple Contacting the Center of the Component Mounted on the Designed Heat Sink.
- Thermal Grease Should be Applied Properly.