

## Features

- Special alloy resistor
- Power rating at 70 °C: CRA2010 - 1.5 W, CRA2512 - 3 W
- RoHS compliant\*

## Applications

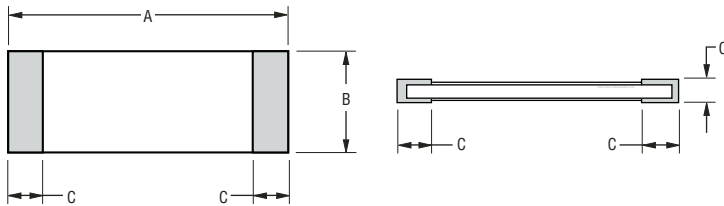
- Power supplies
- Stepper motor drives

# CRA2010/CRA2512 - High Power Current Sense Chip Resistor

### Electrical Characteristics

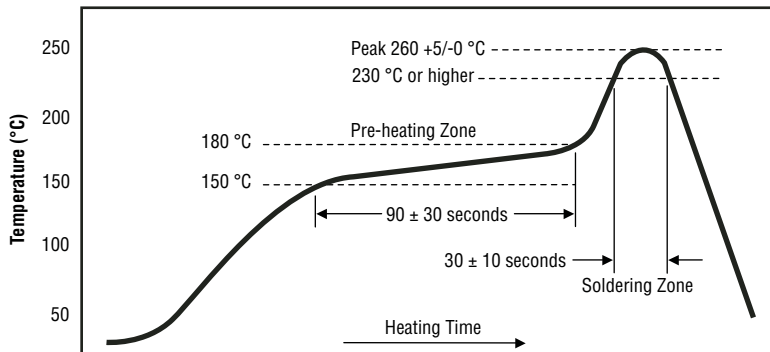
| Characteristic              | CRA2010              | CRA2512 |
|-----------------------------|----------------------|---------|
| Power Rating @ 70 °C        | 1.5 W                | 3 W     |
| Operating Temperature Range | -55 °C to +170 °C    |         |
| Derated to Zero Load at     | +170 °C              |         |
| Maximum Working Voltage     | $(P \times R)^{1/2}$ |         |
| Insulation Resistance       | > 100 megohms        |         |
| Resistance Range            | 0.01 - 0.100 ohms    |         |
| Resistance Tolerance        | ±1 %, ±5 %           |         |
| Temperature Coefficient     | ±75 PPM/°C           |         |

### Product Dimensions



| Model   | A   | B   | C   |
|---------|---|---|---|
| CRA2010 | $\frac{5.0 \pm 0.20}{(0.1962 \pm 0.008)}$ | $\frac{2.5 \pm 0.20}{(0.0984 \pm 0.008)}$ | $\frac{0.6 \pm 0.20}{(0.0236 \pm 0.008)}$ |
| CRA2512 | $\frac{6.40 \pm 0.20}{(0.252 \pm 0.008)}$ | $\frac{3.20 \pm 0.20}{(0.126 \pm 0.008)}$ | $\frac{0.90 \pm 0.20}{(0.035 \pm 0.008)}$ |

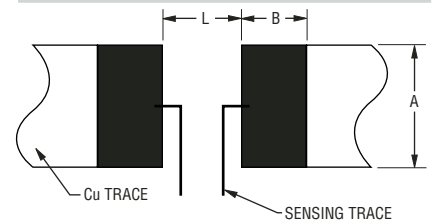
### Soldering Profile



### Characteristic Data

| Test                   | ΔR Max.  |
|------------------------|----------|
| Load Life (1000 hours) | < ±1 %   |
| Short Time Overload    | < ±0.5 % |
| Thermal Shock          | < ±0.5 % |

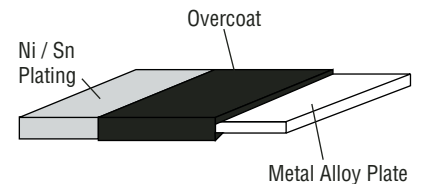
### Recommended Solder Pad Layout



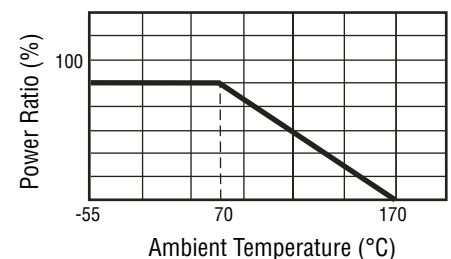
| Model   | A                     | B                     | L                     |
|---------|-----------------------|-----------------------|-----------------------|
| CRA2010 | $\frac{3.1}{(0.122)}$ | $\frac{2.7}{(0.106)}$ | $\frac{3.1}{(0.122)}$ |
| CRA2512 | $\frac{4.0}{(0.157)}$ | $\frac{2.1}{(0.083)}$ | $\frac{4.1}{(0.161)}$ |

DIMENSIONS:  $\frac{\text{MM}}{\text{(INCHES)}}$

### Construction



### Derating Curve

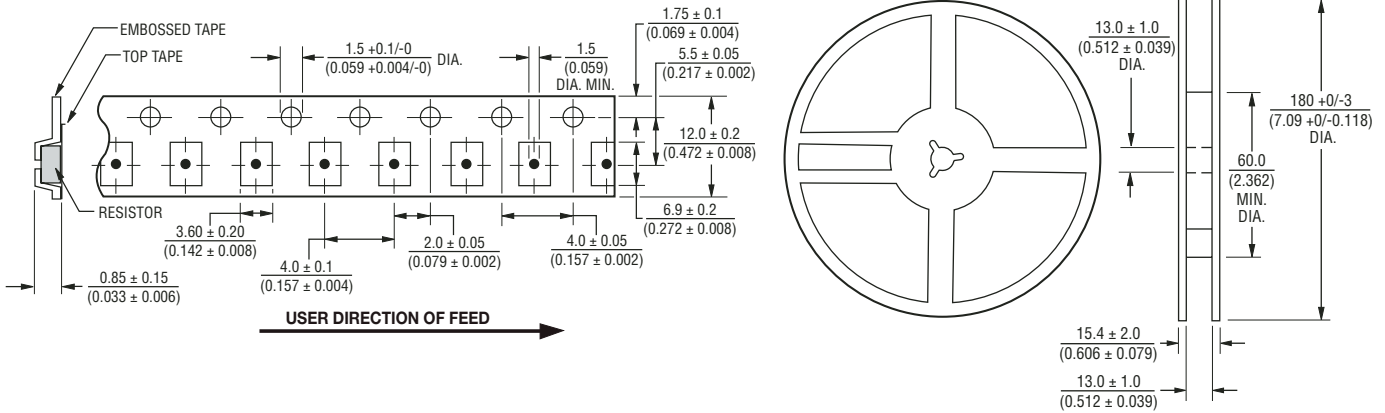


\*RoHS Directive 2002/95/EC Jan 27 2003 including Annex Specifications are subject to change without notice. Customers should verify actual device performance in their specific applications.

# CRA2010/CRA2512 - High Power Current Sense Chip Resistor



## Packaging Dimensions (Conforms to EIA RS-481A)



### Resistance Value Table

| Code | R Value | Code | R Value |
|------|---------|------|---------|
| R010 | 0.010   | R060 | 0.060   |
| R017 | 0.017   | R065 | 0.065   |
| R020 | 0.020   | R070 | 0.070   |
| R025 | 0.025   | R075 | 0.075   |
| R030 | 0.030   | R080 | 0.080   |
| R034 | 0.034   | R085 | 0.085   |
| R040 | 0.040   | R090 | 0.090   |
| R045 | 0.045   | R095 | 0.095   |
| R050 | 0.050   | R100 | 0.100   |
| R055 | 0.055   |      |         |

### How To Order

Model \_\_\_\_\_ **CRA 2512 - G Z - R017 E LF**

(CRA = Precision Chip Resistor)

Size \_\_\_\_\_

2010 = 2010 Size

2512 = 2512 Size

Resistance Tolerance \_\_\_\_\_

- F = ±1 %
- J = ±5 %

TCR (PPM/°C) \_\_\_\_\_

- Z = ±75 PPM/°C

Resistance Value \_\_\_\_\_

"R" (decimal point) followed by three significant digits (example: R025 = 0.025 ohm)

Packaging \_\_\_\_\_

- E = 4000 pieces on 180 mm (7 inch) reel

Termination \_\_\_\_\_

- LF = Tin-plated (RoHS compliant)



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Asia-Pacific:

TEL +886-2 25624117 • FAX +886-2 25624116

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TEL +41-41 7685555 • FAX +41-41 7685510

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