

### Features

- RoHS compliant\*
- Small package dimensions
- Power rating at 70 °C = 0.03 W
- Three layer termination process with nickel barrier helps prevent leaching and provides excellent solderability



This series is obsolete and not recommended for new designs.

## CR01005-AS Series - Sulfur-Resistant Thick Film Chip Resistors

### General Characteristics

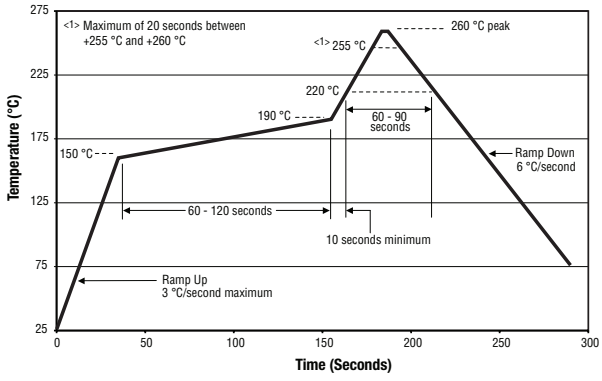
Characteristic	CR01005-AS
Power Rating @ 70 °C per Resistor	0.03 W
Resistor Tolerance	±1 %, ±5 %
Resistance Range - 1 % Tolerance (E24 + E96)	10 ohms to 1 megohm
Resistance Range - 5 % Tolerance (E24), Zero-ohm Jumper	10 ohms to 1 megohm 0 ohms
Temperature Coefficient of Resistance (TCR) 1 %, 5 % Tolerance Zero-ohm Jumper	±250 ppm/°C N/A
Maximum Overload Voltage	15 V
Maximum Working Voltage	30 V
Operating Temperature Range	-55 to +125 °C
Storage Conditions	+5 ~ +40 °C, 25~75 % RH, 1 year
Derating Temperature	+70 °C
Packaging Embossed Tape	40,000 pcs. per reel
Zero-ohm Jumper: Current Rating Maximum Resistance	0.3 A per element 100 milliohms

### Environmental Characteristics

Specification	Test Method (JIS C 5201-1)	Characteristics
Short Time Overload	Rated voltage x 2.5, 5 seconds	±(2 % +0.1 ohm)
Soldering Heat	+260 °C ±5 °C, 10 ±1 seconds	±(2 % +0.1 ohm)
Temperature Cycling	-55 °C (30 minutes) - normal (2~3 minutes) +125 °C (30 minutes) - normal (2~3 minutes), 5 cycles	±(5 % +0.05 ohm)
Moisture Load Life	+40 °C, 90~95 % RH, 1000 hours, 1.5 hours ON, 0.5 hours OFF	±(5 % +0.1 ohm)
Load Life	+70 °C, 1000 hours, 1.5 hours ON, 0.5 hours OFF	±(5 % +0.1 ohm)
Sulfur Test	3 ppm H <sub>2</sub> S, +50 °C, 90~95 % RH, 100 hours	±(5 % +0.1 ohm)

NOTE: Zero-ohm jumper ≤100 milliohms.

### Soldering Profile



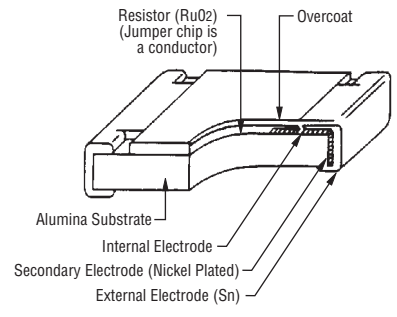
### How To Order

**CR 01005 - F W - 1002 H AS**

- Chip Resistor
- Size
  - 01005
- Tolerance
  - F = 1 %
  - J = 5 %
- TCR (ppm/°C)
  - W = ±250
  - / = N/A (for Jumper)
- Resistance Code
  - For 1 % Tolerance
    - <100 ohms: "R" designates decimal point (example: 24R3 = 24.3 ohms)
    - ≥100 ohms: First three digits are significant, fourth digit represents number of zeros to follow (example: 8252 = 82.5K ohms)
  - For 5 % Tolerance
    - <10 ohms: "R" designates decimal point (example: 4R7 = 4.7 ohms)
    - ≥10 ohms: First two digits are significant, third digit represents number of zeros to follow (example: 474 = 470K ohms; 000 = Zero-ohm jumper)
- Packaging
  - H = Embossed Tape (40,000 pcs. on 7-inch plastic reel)
- Special Characteristics
  - AS = Sulfur-resistant, Tin-plated terminations (RoHS compliant)

For Standard Values Used in Capacitors, Inductors, and Resistors, [click here](#).

### Construction



**WARNING Cancer and Reproductive Harm**  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

\*RoHS Directive 2015/863, Mar 31, 2015 and Annex. Specifications are subject to change without notice. Users should verify actual device performance in their specific applications. The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at [www.bourns.com/docs/legal/disclaimer.pdf](http://www.bourns.com/docs/legal/disclaimer.pdf).

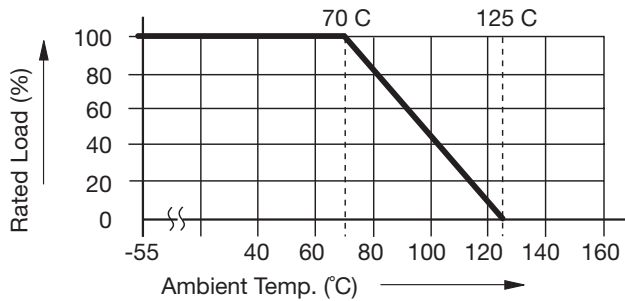
## Features (Continued)

- Suitable for most types of soldering processes
- Standard packaging on paper tape and reel
- Sulfur-resistant design

## CR01005-AS Series - Sulfur-Resistant Thick Film Chip Resistors

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### Derating Curve

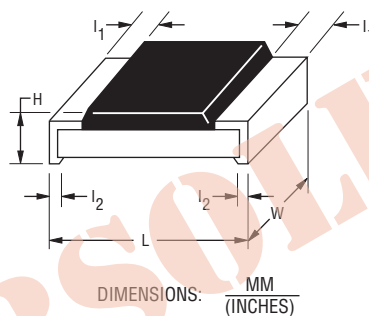


### Typical Part Marking

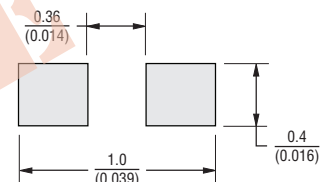
..... No Marking

### Product Dimensions

Dim.	CR01005-AS
L	$\frac{0.40 \pm 0.02}{(0.016 \pm 0.001)}$
W	$\frac{0.20 \pm 0.02}{(0.008 \pm 0.001)}$
H	$\frac{0.13 \pm 0.02}{(0.005 \pm 0.001)}$
l <sub>1</sub>	$\frac{0.10 \pm 0.03}{(0.004 \pm 0.001)}$
l <sub>2</sub>	$\frac{0.10 \pm 0.03}{(0.004 \pm 0.001)}$



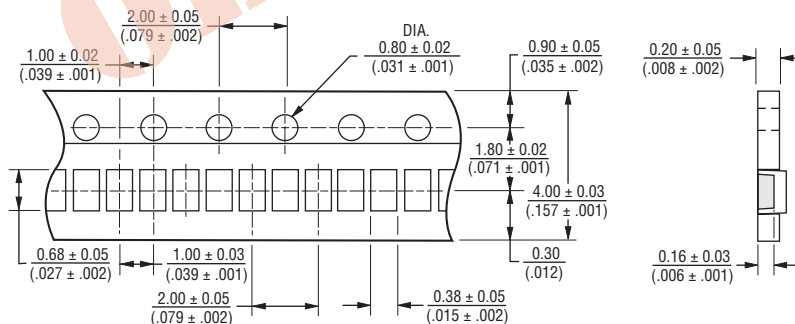
### Recommended Land Pattern



### Packaging Specifications

#### Embossed Tape

Reel Diameter:  $\frac{180}{(7.087)}$



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