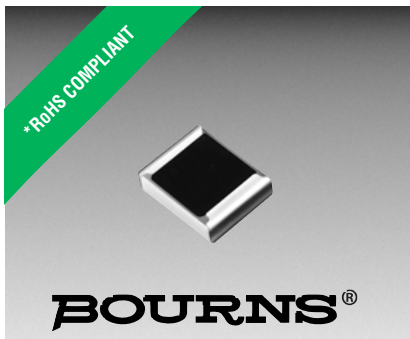




## Features

- Requires 64 % less space than 0402-size resistor
- RoHS compliant\*
- Power rating at 70 °C = 1/20 W
- Three layer termination process with nickel barrier prevents leaching and provides excellent solderability
- Suitable for most types of soldering processes
- Standard packaging on paper tape and reel
- AEC-Q200 approval upon request

## CR0201 - Chip Resistor

### Electrical Characteristics

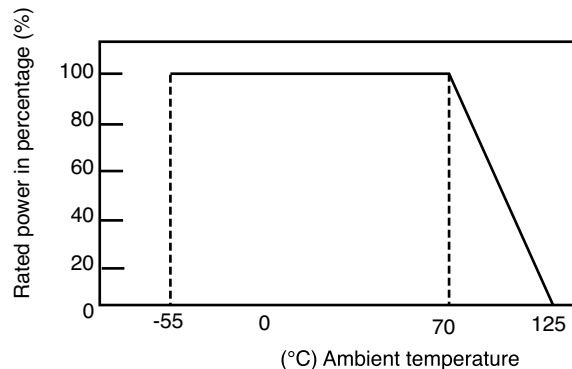
Power Rating @ 70 °C..... 1/20 W  
 Operating Temperature Range  
     ..... -55 °C to +125 °C  
 Derated to 0 Load at .....+125 °C  
 Maximum Working Voltage.....25 V  
 Maximum Overload Voltage .....50 V  
 Resistance Range  
     1 %, E-96  
     and E-24 ..... 10 ohms to 2 megohms  
     5 %, E-24 ..... 10 ohms to 10 megohms  
 Zero Ohm Jumper.....<0.05 ohms  
 Temperature Coefficient  
     1 % and 5 % ..... ±200 ppm/°C  
 Zero Ohm Jumper..... N/A  
 Zero Ohm Jumper  
     Rated Current.....0.5 A  
     Maximum Overload Current..... 1 A

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

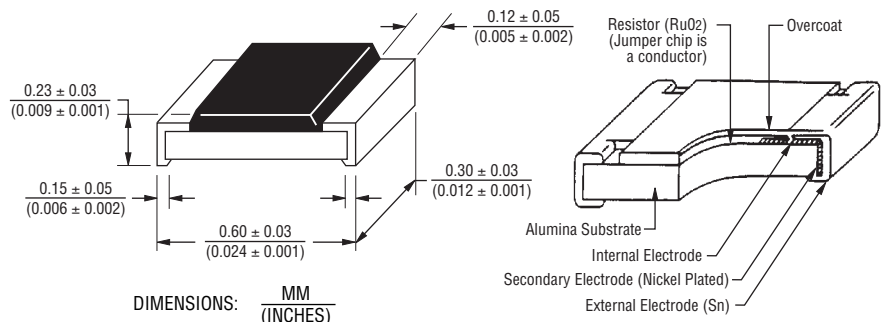
### Part Marking System

No Marking on the CR0201 Chip Resistors.

### Derating Curve



### Dimensional Drawings



### How to Order

**CR 0201 - F W - 8252 G LF**

Model \_\_\_\_\_  
 (CR = Chip Resistor)

Size \_\_\_\_\_  
     • 0201

Resistance Tolerance \_\_\_\_\_  
     F = ±1 % ..... For values from 10 ohms through 2 megohms  
     J = ±5 % ..... For values from 10 ohms through 10 megohms, and for zero ohm jumper

TCR (ppm/°C) \_\_\_\_\_  
     W = ±200 ..... Used with "F" and "J" Resistance Tolerance code for all values except zero ohm jumper  
     / = N/A ..... Used with zero ohm jumper only

Resistance Value \_\_\_\_\_  
     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 ..... First two digits are significant, third digit represents number of zeros to follow (example: 474 = 470k ohms; 000 = Jumper)

Packaging \_\_\_\_\_  
     G = Paper Tape (10,000 pcs.) on 7-inch Plastic Reel

Termination \_\_\_\_\_  
     LF = Tin-plated (RoHS compliant)

\*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.

Specifications are subject to change without notice.

The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time. Users should verify actual device performance in their specific applications.

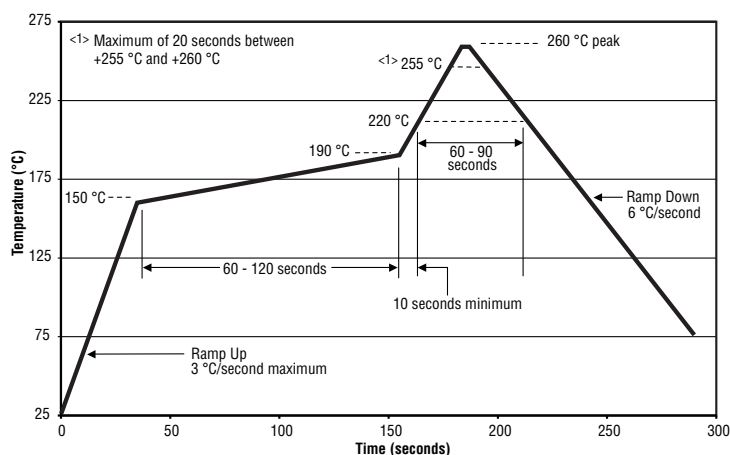
# CR0201 - Chip Resistor

**BOURNS®**

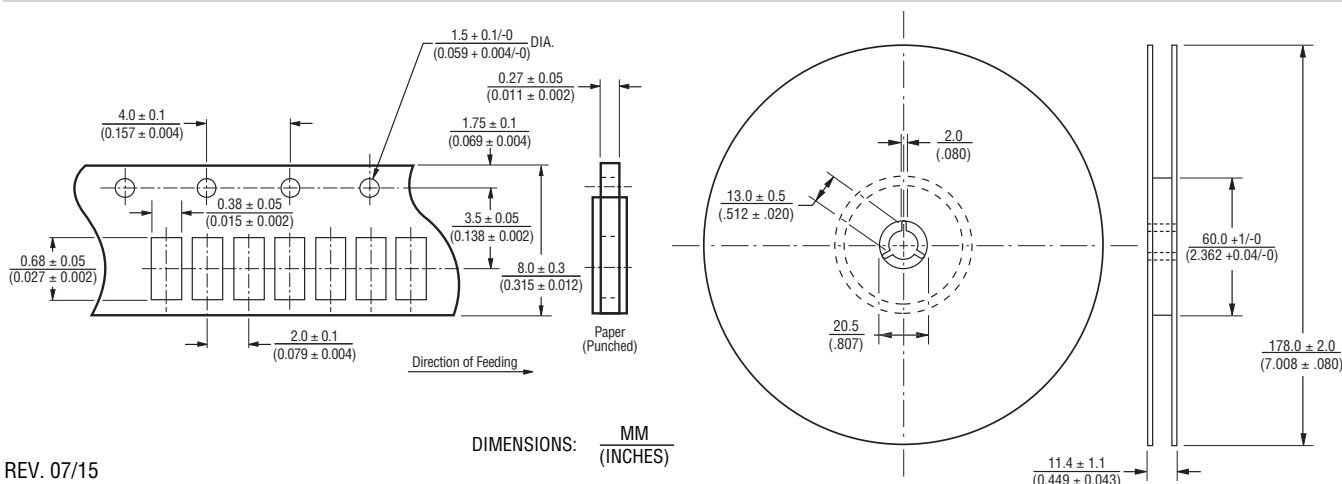
## Performance Characteristics

| Test                            | Procedure                                                                                | Method            | Test Limits $\Delta R$          |
|---------------------------------|------------------------------------------------------------------------------------------|-------------------|---------------------------------|
| Thermal Shock                   | -55 °C for 30 minutes, +155 °C for 30 minutes, 5 cycles                                  | IEC60115-1-4.19   | $\leq \pm(3 \% + 0.1 \Omega)$   |
| Short Time Overload             | 2.5 X rated voltage for 5 seconds                                                        | IEC60115-1-4.13   | $\leq \pm(3 \% + 0.1 \Omega)$   |
| Resistance to Solder Heat       | 270 $\pm 5$ °C for 10 $\pm 1$ seconds                                                    | IEC60115-1-4.18   | $\leq \pm(3.0 \% + 0.1 \Omega)$ |
| Resistance to Dry Heat          | 125 $\pm 5$ °C for 96 $\pm 4$ hours                                                      | IEC60115-1-4.23.2 | $\leq \pm(2.0 \% + 0.1 \Omega)$ |
| Load Life                       | Rated voltage for 1000 hours, 70 °C, 1.5 hours "ON", 0.5 hours "OFF"                     | IEC60115-1-4.25.1 | $\leq \pm(5.0 \% + 0.1 \Omega)$ |
| Load Life with Humidity         | Rated voltage for 1000 hours, 40 $\pm 2$ °C, 90~95 % RH, 1.5 hours "ON", 0.5 hours "OFF" | IEC60115-1-4.24   | $\leq \pm(5.0 \% + 0.1 \Omega)$ |
| Solderability                   | 245 $\pm 5$ °C, 2 $\pm 0.5$ seconds                                                      | IEC60115-1-4.17   | $\geq 95$ % of area covered     |
| Bending                         | 3 mm                                                                                     | IEC60115-1-4.33   | $\leq \pm(1.0 \% + 0.1 \Omega)$ |
| Dielectric Withstanding Voltage | --                                                                                       | IEC60115-1-4.7    | $> 50$ V                        |
| Insulation Resistance           | 50 V                                                                                     | IEC60115-1-4.6    | $\geq 1$ G $\Omega$             |

## Soldering Profile for RoHS Compliant Chip Resistors and Arrays



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



REV. 07/15

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