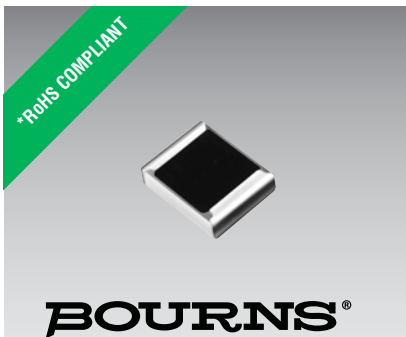




Features

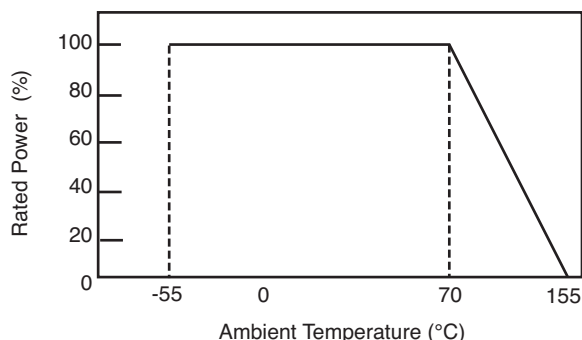
- Small package dimensions
- RoHS compliant*
- Power rating at 70 °C = 1/16 W
- Tight dimensional tolerances
- Three layer termination process with nickel barrier prevents leaching and provides excellent solderability
- Suitable for most types of soldering processes
- Standard packaging on paper tape and reel

CR0402 - Chip Resistor

Electrical Characteristics

Power Rating @ 70 °C1/16 W
 Operating Temperature Range
-55 °C to +155 °C
 Derated to 0 Load at.....+155 °C
 Maximum Working Voltage.....50 V
 Maximum Overload Voltage100 V
 Resistance Range
 1 %, E-96
 and E-24..... 10 ohms to 10 megohms
 5 %, E-24 1 ohm to 20 megohms
 Zero Ohm Jumper.....<0.05 ohms
 Temperature Coefficient
 1 % 10 Ω ≤ R ≤ 1 MΩ ±100 ppm/°C
 1 MΩ < R ≤ 10 MΩ ±200 ppm/°C
 5 % 10 Ω ≤ R ≤ 10 MΩ ±200 ppm/°C
 10 MΩ < R ≤ 20 MΩ ±400 ppm/°C
 1 Ω ≤ R < 10 Ω -200 to +500 ppm/°C
 AEC-Q200 Contact Bourns
 to confirm availability

Derating Curve



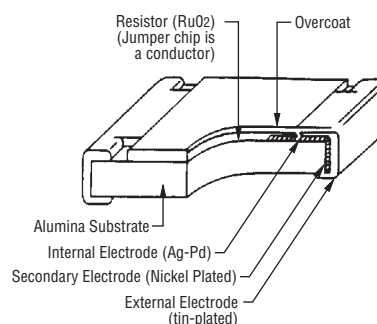
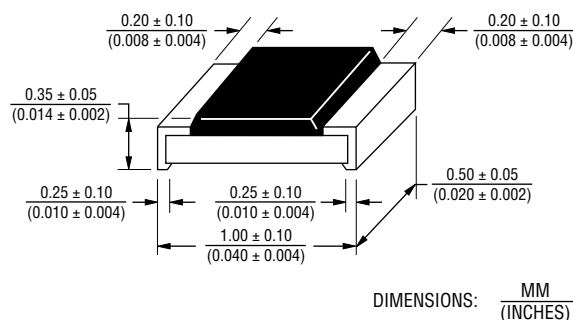
Standard Values

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

Part Marking System

No Marking on the CR0402 Chip Resistors.

Dimensional Drawings



Performance Characteristics

Test	Procedure	Method	Test Limits ΔR	
			1 %	5 %
Thermal Shock	-55 °C for 30 minutes, +155 °C for 30 minutes, 5 cycles	IEC60115-1-4.19	≤±(0.5 % + 0.05 Ω)	≤±(1 % + 0.05 Ω)
Short Time Overload	2.5 X rated voltage for 5 seconds	IEC60115-1-4.13	≤±(2 % + 0.1 Ω)	
Resistance to Solder Heat	270 ±5 °C for 10 ±1 seconds	IEC60115-1-4.18	≤±(0.5 % + 0.05 Ω)	≤±(1 % + 0.05 Ω)
Resistance to Dry Heat	125 ±5 °C for 96 ±4 hours	IEC60115-1-4.23.2	≤±(1 % + 0.05 Ω)	≤±(2 % + 0.1 Ω)
Load Life	Rated voltage for 1000 hours, 70 °C, 1.5 hours "ON", 0.5 hours "OFF"	IEC60115-1-4.25.1	≤±(3 % + 0.1 Ω)	
Load Life with Humidity	Rated voltage for 1000 hours, 40 ±2 °C, 90~95 % RH, 1.5 hours "ON", 0.5 hours "OFF"	IEC60115-1-4.24	≤±(3 % + 0.1 Ω)	
Solderability	245 ±5 °C, 2 ±0.5 seconds	IEC60115-1-4.17	≥95 % of area covered	
Bending	3 mm	IEC60115-1-4.33	≤±(0.5 % + 0.05 Ω)	≤±(1 % + 0.05 Ω)
Dielectric Withstanding Voltage	--	IEC60115-1-4.7	>100 V	
Insulation Resistance	100 V	IEC60115-1-4.6	≥1 GΩ	

*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.

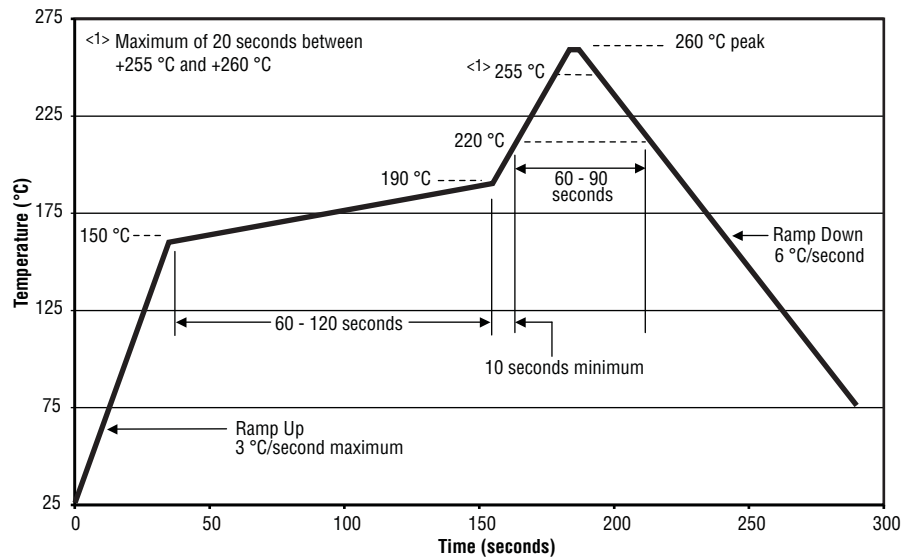
The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.

Users should verify actual device performance in their specific applications.

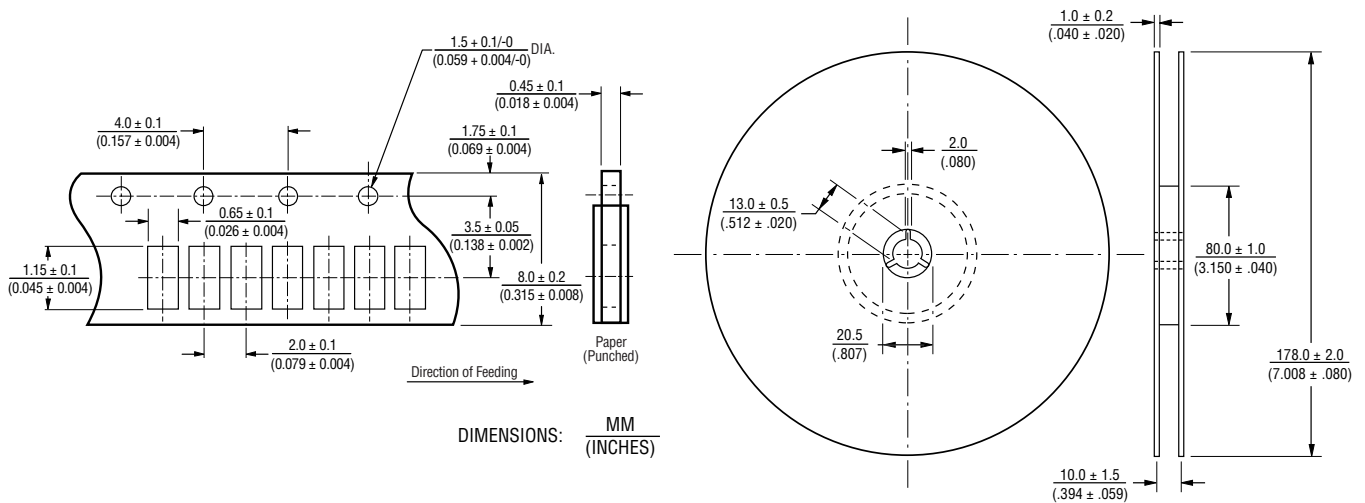
CR0402 - Chip Resistor

BOURNS®

Soldering Profile for RoHS Compliant Chip Resistors and Arrays



Packaging Dimensions (Conforms to EIA RS-481A)



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.

CR0402 - Chip Resistor

BOURNS®

How to Order

CR 0402 - F X - 8252 G LF

Model _____ (CR = Chip Resistor)					
Size _____ • 0402					
Resistance Tolerance _____ F = $\pm 1\%$ Used with "X" TCR code only for values from 10 ohms through 1 megohm; and Used with "W" TCR code only for values above 1 megohm. through 10 megohms. J = $\pm 5\%$ Used with "W" TCR code for values from 10 ohms through 10 megohms; Used with "Z" TCR code for values above 10 megohms through 20 megohms; Used with "/" TCR code for zero ohm (jumper); and for values from 1 ohm through 9.1 ohms.					
TCR (ppm/ $^{\circ}$ C) _____ X = ± 100 W = ± 200 Z = ± 400 / = -200 to +500					
Resistance Value _____ <u>For 1 % Tolerance:</u> <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). <u>For 5 % Tolerance:</u> <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 = Jumper).					
Packaging _____ G = Paper Tape (10,000 pcs.) on 7 " Plastic Reel					
Termination _____ LF = Tin-plated (RoHS compliant)					

REV. 08/15

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.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Bourns:

CR0402-J-000GLF	CR0402-JW-390GLF	CR0402-JW-180GLF	CR0402-JW-100GLF	CR0402-JW-220GLF
CR0402-JW-330GLF	CR0402-FX-1023GLF	CR0402-FX-1072GLF	CR0402-FX-10R5GLF	CR0402-FX-1132GLF
CR0402-FX-1150GLF	CR0402-FX-1151GLF	CR0402-FX-1153GLF	CR0402-FX-1180GLF	CR0402-FX-1181GLF
CR0402-FX-11R5GLF	CR0402-FX-1203GLF	CR0402-FX-1241GLF	CR0402-FX-1242GLF	CR0402-FX-1270GLF
CR0402-FX-1271GLF	CR0402-FX-1272GLF	CR0402-FX-12R1GLF	CR0402-FX-1330GLF	CR0402-FX-1332GLF
CR0402-FX-1371GLF	CR0402-FX-1372GLF	CR0402-FX-13R7GLF	CR0402-FX-1401GLF	CR0402-FX-1402GLF
CR0402-FX-1433GLF	CR0402-FX-1473GLF	CR0402-FX-14R0GLF	CR0402-FX-14R3GLF	CR0402-FX-1542GLF
CR0402-FX-1543GLF	CR0402-FX-1622GLF	CR0402-FX-1623GLF	CR0402-FX-1651GLF	CR0402-FX-1652GLF
CR0402-FX-1691GLF	CR0402-FX-1740GLF	CR0402-FX-1741GLF	CR0402-FX-1743GLF	CR0402-FX-1780GLF
CR0402-FX-1783GLF	CR0402-FX-17R4GLF	CR0402-FX-17R8GLF	CR0402-FX-1823GLF	CR0402-FX-1871GLF
CR0402-FX-1911GLF	CR0402-FX-1961GLF	CR0402-FX-19R6GLF	CR0402-FX-2051GLF	CR0402-FX-2101GLF
CR0402-FX-2103GLF	CR0402-FX-21R0GLF	CR0402-FX-2261GLF	CR0402-FX-2323GLF	CR0402-FX-2433GLF
CR0402-FX-2493GLF	CR0402-FX-24R3GLF	CR0402-FX-2553GLF	CR0402-FX-2612GLF	CR0402-FX-2671GLF
CR0402-FX-2672GLF	CR0402-FX-2740GLF	CR0402-FX-2743GLF	CR0402-FX-27R4GLF	CR0402-FX-2802GLF
CR0402-FX-2803GLF	CR0402-FX-2872GLF	CR0402-FX-2873GLF	CR0402-FX-28R0GLF	CR0402-FX-2941GLF
CR0402-FX-2942GLF	CR0402-FX-29R4GLF	CR0402-FX-3013GLF	CR0402-FX-3091GLF	CR0402-FX-30R9GLF
CR0402-FX-3160GLF	CR0402-FX-3241GLF	CR0402-FX-3243GLF	CR0402-FX-3322GLF	CR0402-FX-3323GLF
CR0402-FX-3402GLF	CR0402-FX-3403GLF	CR0402-FX-3480GLF	CR0402-FX-3482GLF	CR0402-FX-3483GLF
CR0402-FX-34R8GLF	CR0402-FX-3570GLF	CR0402-FX-3571GLF	CR0402-FX-3572GLF	CR0402-FX-3573GLF
CR0402-FX-3650GLF	CR0402-FX-36R5GLF	CR0402-FX-3741GLF	CR0402-FX-4020GLF	CR0402-FX-4120GLF