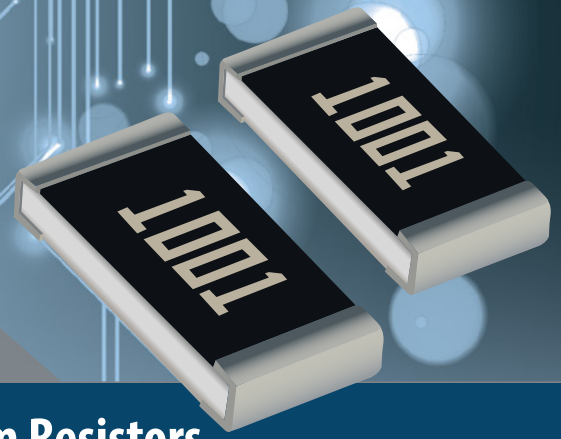


NEW PRODUCT BRIEF



Bourns® CRT-A Series Automotive Grade Thin Film Resistors

INTRODUCTION

The Bourns® Model CRT-A Series is a new automotive grade thin film technology resistor family. These resistors are designed to satisfy application requirements for greater accuracy, smaller package sizes, lower Temperature Coefficient of Resistance (TCR) and that meet AEC-Q200 compliance. Engineered using Bourns' advanced resistive technology architecture, the CRT-A Series delivers a high power rating in a smaller footprint compared to traditional through-hole thick film resistors. This allows customers to optimize designs with higher accuracy and lower power dissipation, thereby helping to enhance product reliability and stability. These compact, yet high power-rated resistors offering accurate resistance levels are now required in space-constrained applications, such as mobile phones, SD cards, DDR memory modules and camera modules, as well as for a variety of automotive applications.

FEATURES

- Ultra-tight resistance tolerance
- Wide resistance range from 10 Ω to 1M Ω and TCR down to ± 10 PPM/ $^{\circ}$ C
- Available in four package sizes (0402, 0603, 0805 and 1206)
- AEC-Q200 compliant
- Sulfur resistant
- RoHS compliant*

BENEFITS

- Accurate resistance tolerance and lower TCR enable lower power dissipation and higher stability
- Delivers enhanced signal quality in a small SMD package that saves valuable PCB space
- High reliability, automotive grade resistors meet enhanced precision requirements in a variety of automotive applications.

APPLICATIONS

- Automotive
- Precision circuit
- DDR memory modules
- SD cards
- Automation equipment
- Navigation equipment

HOW TO ORDER

CRT 0603 A CW - 1003 E LF

Model _____
CRT = Thin Film Precision
Chip Resistor

Size _____
0402
0603
0805
1206

Compliance _____
A = AEC-Q200 Compliant

Resistance Tolerance _____
F = ± 1 % B = ± 0.1 %
D = ± 0.5 % C = ± 0.25 %

TCR (PPM/ $^{\circ}$ C) _____
Z = ± 50
Y = ± 25
X = ± 15
W = ± 10

Resistance Value _____
<100 ohms: "R" represents decimal point
(example: 24R3 = 24.3 ohms)
 ≥ 100 ohms: First three digits are significant, fourth
digit represents number of zeroes to
follow (example: 8252 = 82.5K ohms)

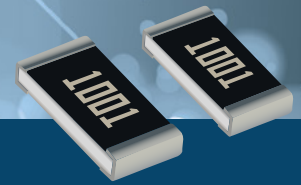
Packaging _____
G = Paper tape (10K pcs.) on 7" plastic reel
(CRT0402A)
E = Paper tape (5K pcs.) on 7" plastic reel
(CRT0603A, CRT0805A, CRT1206A)

Termination _____
LF = Tin-plated (RoHS Compliant)

*RoHS Directive 2015/863, Mar 31, 2015 and Annex.

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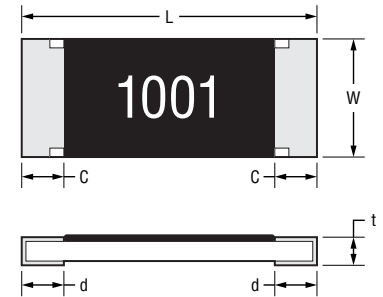
ELECTRICAL CHARACTERISTICS

Series	Power Rating @ 70 °C	Max. Working Voltage	Max. Overload Voltage	Tolerance	Temperature Coefficient of Resistance (TCR)	Operating Temperature Range	Derated to Zero Load
CRT0402A	1/16 W	50 V	100 V	0.5 % / 1 % / 5 %	10 to 50 PPM/°C	-55 °C to +125 °C	@ +155 °C
CRT0603A	1/10 W	75 V	150 V				
CRT0805A	1/8 W	150 V	300 V				
CRT1206A	1/4 W	200 V	400 V				

For full characteristics, see data sheet

PRODUCT DIMENSIONS

Dimension	CRT0402A	CRT0603A	CRT0805A	CRT1206A
L	$\frac{1.00 \pm 0.10}{(.040 \pm .004)}$	$\frac{1.60 \pm 0.10}{(.063 \pm .004)}$	$\frac{2.00 \pm 0.10}{(.079 \pm .004)}$	$\frac{3.20 \pm 0.15}{(.126 \pm .006)}$
W	$\frac{0.50 \pm 0.05}{(.020 \pm .002)}$	$\frac{0.80 \pm 0.10}{(.031 \pm .004)}$	$\frac{1.25 \pm 0.10}{(.049 \pm .004)}$	$\frac{1.55 \pm 0.15}{(.061 \pm .006)}$
t	$\frac{0.35 \pm 0.10}{(.014 \pm .004)}$	$\frac{0.45 \pm 0.10}{(.018 \pm .004)}$	$\frac{0.50 \pm 0.15}{(.020 \pm .006)}$	$\frac{0.55 \pm 0.15}{(.022 \pm .006)}$
c	$\frac{0.20 \pm 0.10}{(.008 \pm .004)}$	$\frac{0.30 \pm 0.20}{(.012 \pm .008)}$	$\frac{0.40 \pm 0.20}{(.016 \pm .008)}$	$\frac{0.50 \pm 0.30}{(.020 \pm .012)}$
d	$\frac{0.25 \pm 0.10}{(.010 \pm .004)}$	$\frac{0.30 +0.20/-0.10}{(.012 +.008/- .004)}$	$\frac{0.40 \pm 0.20}{(.016 \pm .008)}$	$\frac{0.40 \pm 0.20}{(.016 \pm .008)}$



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

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BOURNS®

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