

## Features

- 1 % tolerance from 1.02 megohms to 10 megohms
- RoHS compliant\*
- Power rating at 70 °C: CRH0603 - 0.10 W, CRH0805 - 0.125 W, CRH1206 - 0.25 W
- Suitable for all types of soldering processes

- Three layer contacting process with nickel barrier helps prevent leaching and provides excellent solderability
- Paper tape on reel for automatic placement

## CRH0603/CRH0805/CRH1206 - Chip Resistors

### Electrical Characteristics

Characteristic	Model CRH0603	Model CRH0805	Model CRH1206
Power Rating @ 70 °C	1/10 W	1/8 W	1/4 W
Operating Temperature Range	-55 °C to +125 °C		
Derated to 0 Load at	+125 °C		
Maximum Working Voltage	50 V	100 V	200 V
Maximum Overload Voltage	100 V	200 V	400 V
Resistance Range (E-96 + E-24)	1.02 megohms - 10 megohms		
Temperature Coefficient	±200 ppm/°C		

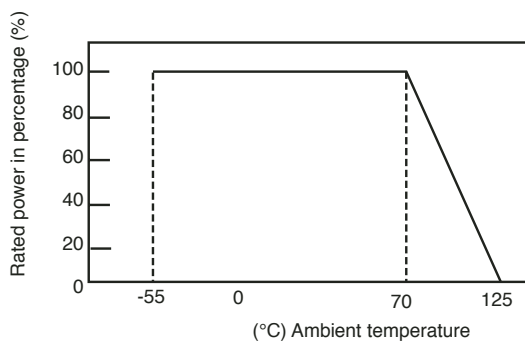
For Standard Values Used in Capacitors, Inductors, and Resistors, [click here](#).

### Chip Dimensions

Dimension	Model CRH0603	Model CRH0805	Model CRH1206
L	$\frac{1.60 \pm 0.10}{(0.063 \pm 0.004)}$	$\frac{2.00 \pm 0.15}{(0.079 \pm 0.006)}$	$\frac{3.20 \pm 0.25}{(0.126 \pm 0.010)}$
W	$\frac{0.80 \pm 0.10}{(0.031 \pm 0.004)}$	$\frac{1.25 \pm 0.15}{(0.049 \pm 0.006)}$	$\frac{1.60 \pm 0.15}{(0.063 \pm 0.006)}$
H	$\frac{0.45 \pm 0.10}{(0.018 \pm 0.004)}$	$\frac{0.50 \pm 0.10}{(0.020 \pm 0.004)}$	$\frac{0.60 \pm 0.15}{(0.024 \pm 0.006)}$
$l_1$	$\frac{0.30 \pm 0.20}{(0.012 \pm 0.008)}$	$\frac{0.40 \pm 0.20}{(0.016 \pm 0.008)}$	$\frac{0.50 \pm 0.25}{(0.020 \pm 0.010)}$
$l_2$	$\frac{0.30 \pm 0.20}{(0.012 \pm 0.008)}$	$\frac{0.40 \pm 0.20}{(0.016 \pm 0.008)}$	$\frac{0.50 \pm 0.20}{(0.020 \pm 0.010)}$

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

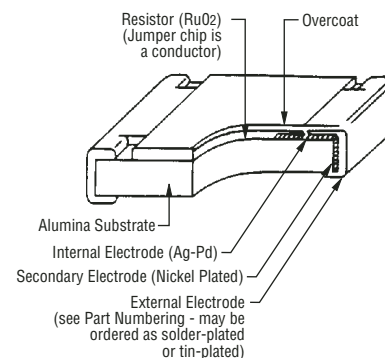
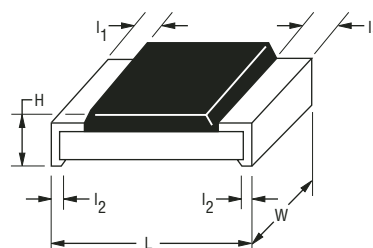
### Derating Curve



### Characteristic Data

Tests per IEC115-1	ΔR Max.
Load Life (1000 hours)	±1 %
Load Life Humidity (1000 hours)	±1 %
Short Time Overload	±1 %

### Dimensional Drawing



#### Asia-Pacific:

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#### Europe:

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#### The Americas:

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[www.bourns.com](http://www.bourns.com)

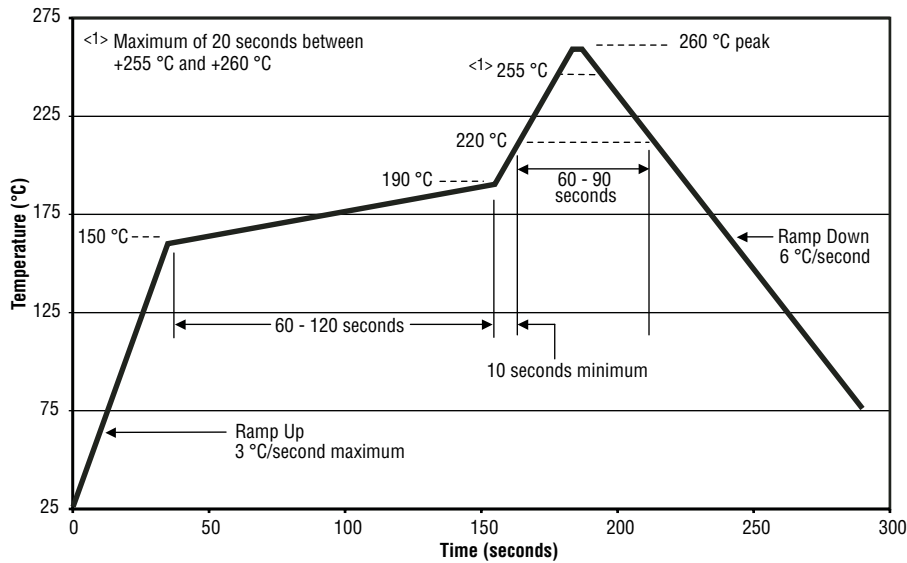
\*RoHS Directive 2002/95/EC Jan 27 2003 including Annex Specifications are subject to change without notice.

Customers should verify actual device performance in their specific applications.

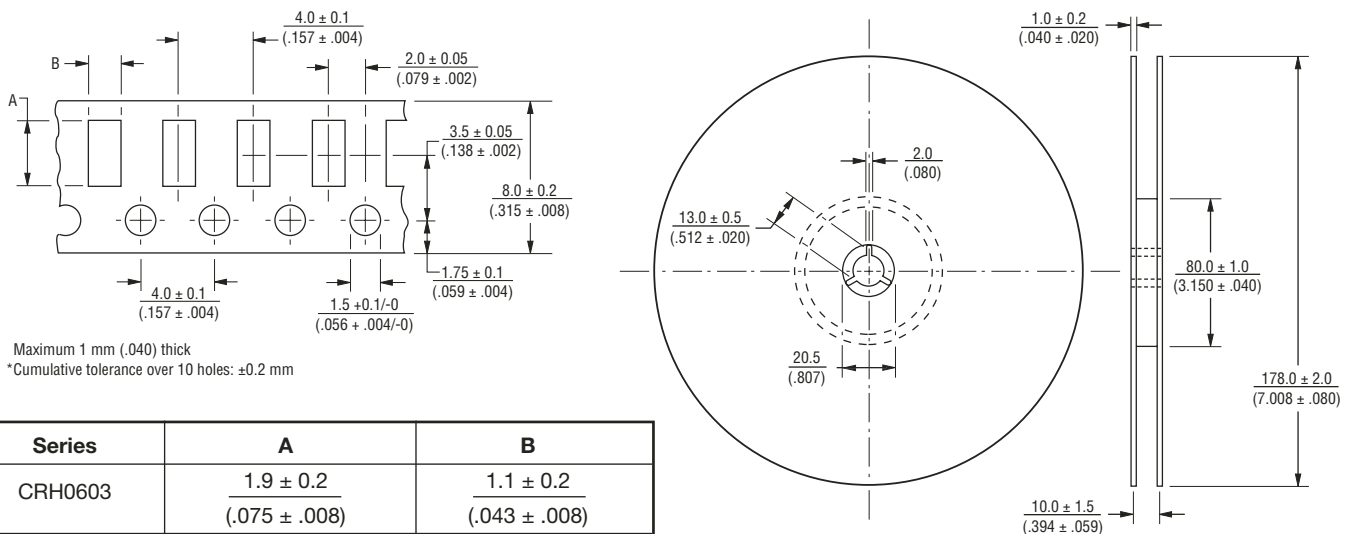
# CRH0603/CRH0805/CRH1206 - Chip Resistors

**BOURNS®**

## Soldering Profile for RoHS Compliant Chip Resistors and Arrays



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



Maximum 1 mm (.040) thick  
\*Cumulative tolerance over 10 holes: ±0.2 mm

Series	A	B
CRH0603	$\frac{1.9 \pm 0.2}{(.075 \pm .008)}$	$\frac{1.1 \pm 0.2}{(.043 \pm .008)}$
CRH0805	$\frac{2.4 \pm 0.2}{(.094 \pm .008)}$	$\frac{1.65 \pm 0.2}{(.065 \pm .008)}$
CRH1206	$\frac{3.57 \pm 0.2}{(.161 \pm .008)}$	$\frac{2.00 \pm 0.2}{(.079 \pm .008)}$

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

Marking on reel: Part number, quantity, resistance value and tolerance, date code.

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# CRH0603/CRH0805/CRH1206 - Chip Resistors



## Resistor Markings

CRH0805  
CRH1206



E-96 marking  
Value = 44.2K ohms

CRH0603  
EIA-96 Marking



1 % marking  
Value = 12.4K ohms

## Marking Explanation

E-96: 4 digits, first three digits are significant, fourth digit is number of zeros to follow.

Letter R is decimal point.

0603 E-96: EIA-96 marking (see table below).

## EIA-96 Marking for CRH0603, 1 %

Code	R Value	Code	R Value	Code	R Value	Code	R Value	Code	R Value	Code	R Value	Code	R Value	Code	R Value
01	100	13	133	25	178	37	237	49	316	61	422	73	562	85	750
02	102	14	137	26	182	38	243	50	324	62	432	74	576	86	768
03	105	15	140	27	187	39	249	51	332	63	442	75	590	87	787
04	107	16	143	28	191	40	255	52	340	64	453	76	604	88	806
05	110	17	147	29	196	41	261	53	348	65	464	77	619	89	825
06	113	18	150	30	200	42	267	54	357	66	475	78	634	90	845
07	115	19	154	31	205	43	274	55	365	67	487	79	649	91	866
08	118	20	158	32	210	44	280	56	374	68	499	80	665	92	887
09	121	21	162	33	215	45	287	57	383	69	511	81	681	93	909
10	124	22	165	34	221	46	294	58	392	70	523	82	698	94	931
11	127	23	169	35	226	47	301	59	402	71	536	83	715	95	953
12	130	24	174	36	232	48	309	60	412	72	549	84	732	96	976

This table shows the first two digits for the three-digit EIA-96 part marking scheme. The third character is a letter multiplier:  
 $Y=10^{-2}$   $X=10^{-1}$   $A=10^0$   $B=10^1$   $C=10^2$   $D=10^3$   $E=10^4$   $F=10^5$

## How To Order

**CRH 1206 - F W - 1024 E LF**

Model \_\_\_\_\_  
 (CRH = Chip Resistor High Value)

Size \_\_\_\_\_  
 • 0603  
 • 0805  
 • 1206

Resistance Tolerance \_\_\_\_\_  
 F =  $\pm 1\%$

TCR (ppm/ $^{\circ}$ C) \_\_\_\_\_  
 W =  $\pm 200$

Resistance Value \_\_\_\_\_  
 $\pm 1\%$ , 1.02 megohms through 10 megohms .....First three digits are significant, fourth digit represents number of zeros to follow  
 (example: 1024 = 1.02 megohms).

Packaging \_\_\_\_\_  
 E = Paper Tape (5,000 pcs.) on 7" Plastic Reel

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

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