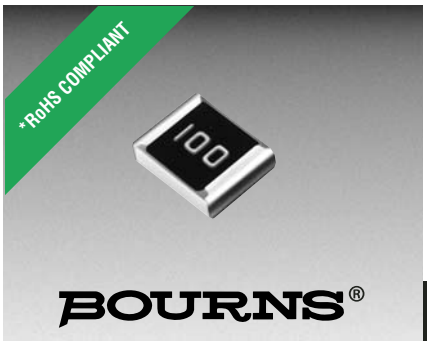


Features

- 0.1 % tolerance from 100 ohms to 360K ohms
- RoHS compliant*
- Three layer contacting process with nickel barrier helps prevent leaching and provides excellent solderability
- Suitable for most types of soldering processes
- Paper tape on reel for automatic placement

CRP Series - Precision Chip Resistors

Electrical Characteristics

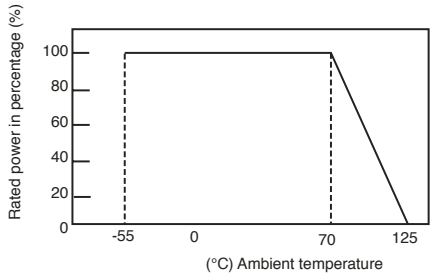
Characteristic	Model CRP0603	Model CRP0805	Model CRP1206
Power Rating @ 70 °C	1/10 W	1/8 W	1/4W
Operating Temperature Range	-55 °C to +125 °C		
Derated to Zero Load at	+125 °C		
Maximum Working Voltage	50 V	150 V	200 V
Maximum Overload Voltage	100 V	300 V	400 V
Resistance Range: (E-96 + E-24 Values)	100 ohms to 360K ohms		
Temperature Coefficient ±50 PPM/°C ±100 PPM/°C	 100 ohms to 35.7K ohms 36K ohms to 100K ohms	 100 ohms to 100K ohms 102K ohms to 360K ohms	 100 ohms to 100K ohms 102K ohms to 360K ohms

Characteristic Data

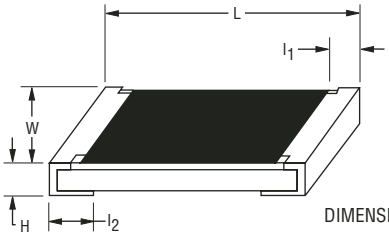
Tests per IEC115-1	ΔR Max.
Load Life (1000 Hours)	±(0.5 % + 0.05 ohms)
Load Life Humidity (1000 Hours	±(0.5 % + 0.05 ohms)
Short Time Overload	±(0.5 % + 0.05 ohms)

For Standard Values Used in Capacitors, Inductors, and Resistors, click here.

Derating Curve

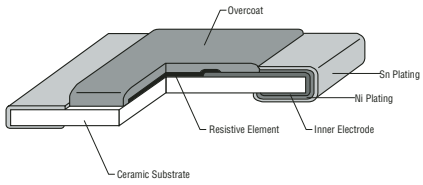


Dimensional Drawing



DIMENSIONS ARE: MM / (INCHES)

Construction



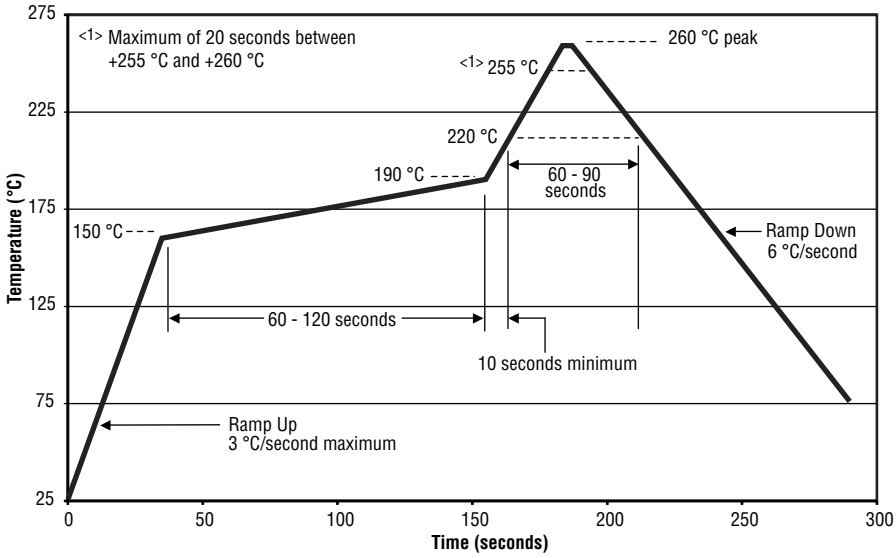
Chip Dimensions

Dimension	Model CRP0603	Model CRP0805	Model CRP1206
L	1.60 ± 0.10 (0.063 ± .004)	2.00 ± 0.15 (0.079 ± .006)	3.10 ± 0.15 (0.122 ± .006)
W	0.80 ± 0.10 (0.031 ± .004)	1.20 ± 0.15 (0.047 ± .006)	1.60 ± 0.15 (0.063 ± .006)
H	0.45 ± 0.15 (0.018 ± .006)	0.50 ± 0.10 (0.020 ± .004)	0.50 ± 0.15 (0.020 ± .006)
I_1	0.35 ± 0.25 (0.014 ± .010)	0.40 ± 0.20 (0.016 ± .008)	0.50 ± 0.30 (0.020 ± .012)
I_2	0.40 ± 0.20 (0.016 ± .008)	0.40 ± 0.20 (0.016 ± .008)	0.50 ± 0.25 (0.020 ± .010)

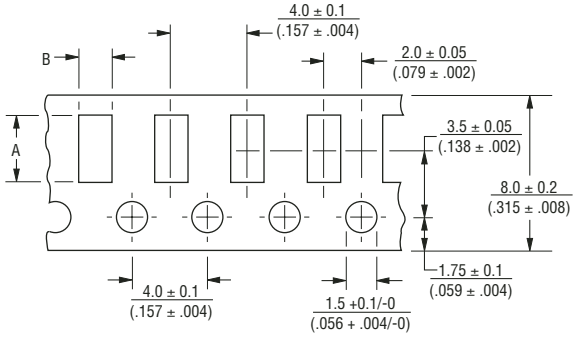
Asia-Pacific:
TEL +886-2 25624117
FAX +886-2 25624116
Europe:
TEL +41-41 7685555
FAX +41-41 7685510
The Americas:
TEL +1-951 781-5500
FAX +1-951 781-5700
www.bourns.com

*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.

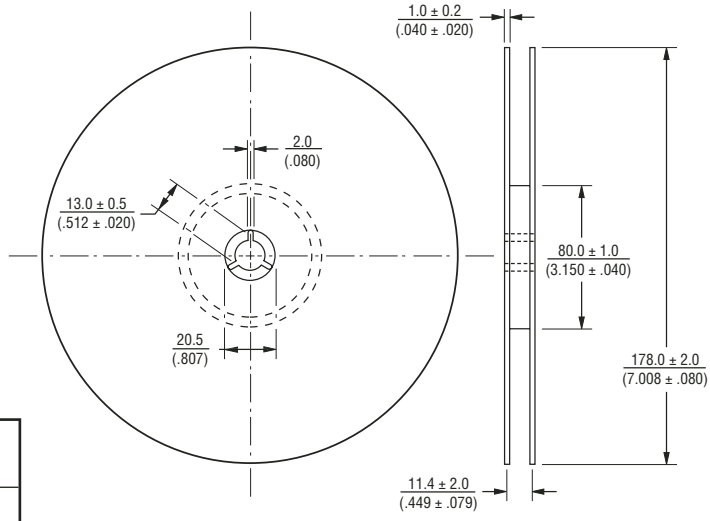
Soldering Profile for RoHS Compliant Chip Resistors and Arrays



Packaging Dimensions (Conforms to EIA RS-481A)



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



Dimension	Model CRP0603	Model CRP0805	Model CRP1206
A	1.9 ± 0.2 (.075 ± .008)	2.4 ± 0.2 (.094 ± .008)	3.6 ± 0.2 (.142 ± .008)
B	1.1 ± 0.2 (.043 ± .008)	1.65 ± 0.2 (.065 ± .008)	2.0 ± 0.2 (.079 ± .008)

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

CRP Series - Precision Chip Resistors

BOURNS®

Resistor Markings

CRP0603
EIA-96 Marking

0.1 % marking
Value = 12.4K ohms

Marking Explanation

E-24:
- 3 digits; first two digits are significant, third digit is number of zeroes to follow.

E-96:
- 0603 size, EIA-96 marked per table below.
- 0805 and 1206 size, marked with 4 digits. First three digits are significant, fourth digit is number of zeroes to follow.

EIA-96 Marking for CRP0603, 0.1 %

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

CRP 0603 - B Z - 7871 E LF

Model
(CRP = Precision Chip Resistor)

Size
0603 = 0603 Size
0805 = 0805 Size
1206 = 1206 Size

Resistance Tolerance
B = ±0.1 %

TCR (PPM/°C)
Z = ±50 PPM/°C, 100 ohms through 35.7K ohms (0603 size); 100 ohms through 100K ohms (0805 and 1206 size)
X = ±100 PPM/°C, 36K ohms through 360K ohms (0603 size); 102K ohms through 360K ohms (0805 and 1206 size)

Resistance Value
First three digits are significant, fourth digit represents number of zeroes to follow (example: 7871 = 7.87K ohms)

Packaging
E = 5,000 pieces on 180 mm (7 inch) reel

Termination
LF = Tin-plated (RoHS compliant)

REV. 02/08