

CRW Series

Power Chip Resistors



- Resistances from 0.1Ohm to 100MOhms
- Power Rating 0.35 to 2Watts
- Resistance Tolerances to $\pm 0.5\%$
- TCR's to $\pm 50\text{ppm}/^\circ\text{C}$
- Improved Pulse Rating on Untrimmed parts
- Thick Film Resistance Element
- Sizes: 1210 / 1216 / 2010 / 2040 / 2512 / 4020



SPECIFICATIONS

Type		1210	1216	2010	2040	2512 (M) ²	4020 (M) ²
Power Rating (W) ¹		0.35	0.5	0.75	2.0	1.5	2.0
Working Voltage (VAC)	Trimmed	200	200	250	250	300 (1000)	500 (4000)
	Untrimmed ($\geq 5\%$ tol.)	600	600	900	900	1200 (2000)	1500 (6000)
Resistance Range (Ω)		Tolerances Available (%) Temperature Coefficients Available ($\pm \text{ppm}/^\circ\text{C}$) ³					
0.1 Ω - <1 Ω		5% to 20% 250	5% to 20% 250	5% to 20% 250	5% to 20% 250	5% to 20% 250	5% to 20% 250
1 Ω - <100 Ω		1% to 20% 100 / 250	1% to 20% 100 / 250	1% to 20% 100 / 250	1% to 20% 100 / 250	1% to 20% 100 / 250	1% to 20% 100 / 250
100 Ω - 100M		1% to 20% 50 / 100	1% to 20% 50 / 100	1% to 20% 50 / 100	1% to 20% 50 / 100	0.5% to 20% 50 / 100	0.5% to 20% 50 / 100

¹ W @ 70 $^\circ\text{C}$ / 0W @ 155 $^\circ\text{C}$

(Note: Solder pads must be of sufficient size to dissipate power)

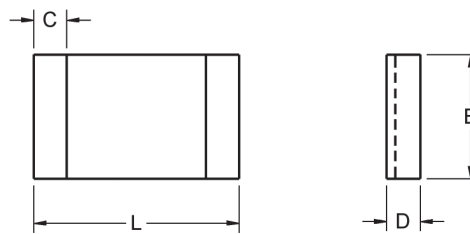
² (M) Meander structure with higher working voltage.

³ 50 PPM : +25 $^\circ\text{C}$ to +125 $^\circ\text{C}$

Specification	Value
Temperature Range	-55 $^\circ\text{C}$ to +155 $^\circ\text{C}$
Climactic Category	55 / 155 / 56
Solderability	250 $^\circ\text{C}$ / 3s
Max. Soldering Temperature	260 $^\circ\text{C}$ / 10s

SPECIFICATIONS (continued)

Long Term Stability	Max ΔR	
	<10 Ω	10 Ω - 100M
Storage 125°C / 1000h	$\pm 1\%$	$\pm 0.5\%$
Storage 155°C / 1000h	$\pm 2\%$	$\pm 1\%$
Load Life / P=70% / 70°C / 1000h	$\pm 2\%$	$\pm 1\%$
Short term overload	$\pm 0.5\%$	$\pm 0.25\%$
Humidity / 96%RH / 40°C / 56 days	$\pm 1\%$	$\pm 0.5\%$



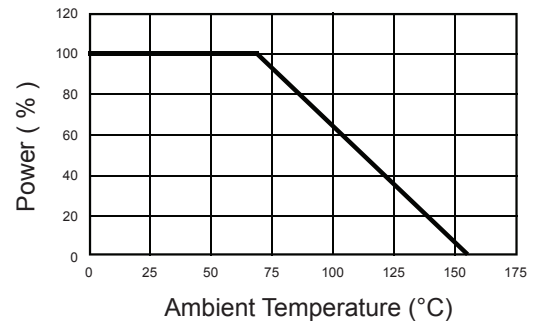
Type	Dimensions			
	L	B	D	C
CRW 1210	0.126 +0.008 / -0.002 [3.2 +0.2 / -0.05]	0.098 +0.008 / -0.002 [2.5 +0.2 / -0.05]	0.020 +0.008 / -0.004 [0.5 +0.2 / -0.1]	0.032 $\pm$ 0.008 [0.8 $\pm$ 0.2]
CRW 1216	0.126 +0.008 / -0.002 [3.2 +0.2 / -0.05]	0.160 +0.008 / -0.002 [4.1 +0.2 / -0.05]	0.020 +0.008 / -0.004 [0.5 +0.2 / -0.1]	0.032 $\pm$ 0.008 [0.8 $\pm$ 0.2]
CRW 2010	0.200 +0.008 / -0.002 [5.1 +0.2 / -0.05]	0.098 +0.008 / -0.002 [2.5 +0.2 / -0.05]	0.024 +0.008 / -0.004 [0.6 +0.2 / -0.1]	0.047 $\pm$ 0.008 [1.2 $\pm$ 0.2]
CRW 2040	0.200 +0.008 / -0.002 [5.1 +0.2 / -0.05]	0.400 +0.008 / -0.002 [10.2 +0.2 / -0.05]	0.024 +0.008 / -0.004 [0.6 +0.2 / -0.1]	0.047 $\pm$ 0.008 [1.2 $\pm$ 0.2]
CRW 2512	0.250 +0.006 / -0.002 [6.3 +0.15 / -0.05]	0.138 +0.008 / -0.002 [3.5 +0.2 / -0.05]	0.024 +0.006 / -0.002 [0.6 +0.15 / -0.05]	0.035 $\pm$ 0.008 [0.9 $\pm$ 0.2]
CRW 4020	0.400 +0.006 / -0.002 [10.2 +0.15 / -0.05]	0.200 +0.008 / -0.002 [5.1 +0.2 / -0.05]	0.024 +0.006 / -0.002 [0.6 +0.15 / -0.05]	0.035 $\pm$ 0.008 [0.9 $\pm$ 0.2]

Packaging:

Bulk or Blister tape to IEC 60286-3

Tape width 8mm / Reel Diameter 180 or 330mm
 Minimum quantity Bulk / 100 pieces per value
 Minimum quantity Tape & Reel / 1000 pieces per value

Power Derating Curve



Ordering Information

Part Description: Part Type - Resistance - Tolerance - TCR

Example: CRW 2040 50 Ohm 5% 100ppm

(Note: if no TCR is specified, the highest value will be supplied)