

# 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  $\pm 50\text{ppm/K}$
- Improved Pulse Rating on Un-trimmed parts
- Thick Film Resistance Element
- Sizes: 1210 / 1216 / 2010 / 2040 / 2512 / 4020



## SPECIFICATIONS

Type		1210	1216	2010	2040	2512 (M) <sup>2</sup>	4020 (M) <sup>2</sup>
Power Rating ( W ) <sup>1</sup>		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	600	600	900	900	1200 (2000)	1500 (6000)
Resistance Range ( $\Omega$ )		Tolerances Available ( % ) Temperature Coefficients Available ( $\pm$ ppm/K ) <sup>3</sup>					
0.1 $\Omega$ - <1 $\Omega$		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 $\Omega$ - <100 $\Omega$		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 $\Omega$ - 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

<sup>1</sup> W @ 70 °C / 0W @ 155 °C

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

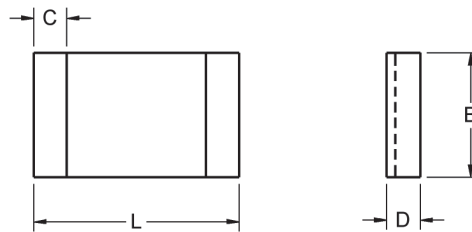
<sup>2</sup> (M) Meander structure with higher working voltage.

<sup>3</sup> 50 PPM : +25°C to +125°C

Specification	Value
Temperature Range	-55°C to +155°C
Climactic Category	55 / 155 / 56
Solderability	250°C / 3s
Max. Soldering Temperature	260°C / 10s

## SPECIFICATIONS (continued)

Long Term Stability	Max $\Delta R$	
	<10 $\Omega$	10 $\Omega$ - 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 $\pm 0.008 / -0.002$ [ 3.2 $\pm 0.2 / -0.05$ ]	0.098 $\pm 0.008 / -0.002$ [ 2.5 $\pm 0.2 / -0.05$ ]	0.020 $\pm 0.008 / -0.004$ [ 0.5 $\pm 0.2 / -0.1$ ]	0.032 $\pm 0.008$ [ 0.8 $\pm 0.2$ ]
CRW 1216	0.126 $\pm 0.008 / -0.002$ [ 3.2 $\pm 0.2 / -0.05$ ]	0.160 $\pm 0.008 / -0.002$ [ 4.1 $\pm 0.2 / -0.05$ ]	0.020 $\pm 0.008 / -0.004$ [ 0.5 $\pm 0.2 / -0.1$ ]	0.032 $\pm 0.008$ [ 0.8 $\pm 0.2$ ]
CRW 2010	0.200 $\pm 0.008 / -0.002$ [ 5.1 $\pm 0.2 / -0.05$ ]	0.098 $\pm 0.008 / -0.002$ [ 2.5 $\pm 0.2 / -0.05$ ]	0.024 $\pm 0.008 / -0.004$ [ 0.6 $\pm 0.2 / -0.1$ ]	0.047 $\pm 0.008$ [ 1.2 $\pm 0.2$ ]
CRW 2040	0.200 $\pm 0.008 / -0.002$ [ 5.1 $\pm 0.2 / -0.05$ ]	0.400 $\pm 0.008 / -0.002$ [ 10.2 $\pm 0.2 / -0.05$ ]	0.024 $\pm 0.008 / -0.004$ [ 0.6 $\pm 0.2 / -0.1$ ]	0.047 $\pm 0.008$ [ 1.2 $\pm 0.2$ ]
CRW 2512	0.250 $\pm 0.006 / -0.002$ [ 6.3 $\pm 0.15 / -0.05$ ]	0.138 $\pm 0.008 / -0.002$ [ 3.5 $\pm 0.2 / -0.05$ ]	0.024 $\pm 0.006 / -0.002$ [ 0.6 $\pm 0.15 / -0.05$ ]	0.035 $\pm 0.008$ [ 0.9 $\pm 0.2$ ]
CRW 4020	0.400 $\pm 0.006 / -0.002$ [ 10.2 $\pm 0.15 / -0.05$ ]	0.200 $\pm 0.008 / -0.002$ [ 5.1 $\pm 0.2 / -0.05$ ]	0.024 $\pm 0.006 / -0.002$ [ 0.6 $\pm 0.15 / -0.05$ ]	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

## Ordering Information

Part Number - Resistance - Tolerance - TCR - Packaging

Example: CRW 2040 50 Ohm 5% 100ppm Tape

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

