

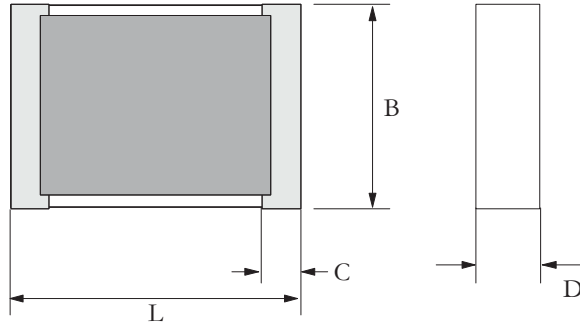
## ● Features

- I Chip resistors in thick film
- II Contact areas Nickel-barrier/tinned
- III RF-versions with air-abrasive trimming
- IV Improved pulse power rating untrimmed

## ● Applications

- I Computers
- II Telecom and wireless
- III Meters and instruments
- IV Electrical devices

## ● Dimensions



Type	Power (W)	Dimensions(mm)			
		L	B	D	C
CRW1210	0.35	$3.2^{+0.2/-0.05}$	$2.5^{+0.2/-0.05}$	$0.5^{+0.2/-0.1}$	$0.8 \pm 0.2$
CRW1216	0.5	$3.2^{+0.2/-0.05}$	$4.1^{+0.2/-0.05}$	$0.5^{+0.2/-0.1}$	$0.8^{+0.2}$
CRW2010	0.5	$5.1^{+0.2/-0.05}$	$2.5^{+0.2/-0.05}$	$0.6^{+0.2/-0.1}$	$1.2^{+0.2}$
CRW2040	1.5	$5.1^{+0.2/-0.05}$	$10.2^{+0.2/-0.05}$	$0.6^{+0.2/-0.1}$	$1.2^{+0.2}$
CRW2512	1.0	$6.3^{+0.2/-0.05}$	$3.5^{+0.2/-0.05}$	$0.6^{+0.2/-0.1}$	$0.9^{+0.2}$
CRW4020	1.5	$10.2^{+0.2}$	$5.1^{+0.2}$	$0.6^{+0.2/-0.1}$	$0.9^{+0.2}$

## ● Ordering Information

Example:

CRW	1210	0.35	J	100K $\Omega$	50ppm/ $^{\circ}$ C
(1)	(2)	(3)	(4)	(5)	(6)
Series Name	Style	Power Rating	Resistance Tolerance	Resistance	T.C.R

(1)Type: CRW SERIES

(2)Style:1210,1216,2010,2040,2512,4020

(3)Power Rating: 0.35=0.35W,0.5=0.5W,1.0=1.0W,1.5=1.5W

(4)Tolerance: D=  $\pm 0.5\%$ ,F=  $\pm 1\%$ ,J=  $\pm 5\%$ ,K=  $\pm 10\%$ ,M=  $\pm 20\%$

(5)Resistance Value:100K $\Omega$ =100K $\Omega$

(6)T.C.R:  $\pm 50\text{ppm}/^{\circ}\text{C}$ ,  $\pm 100\text{ppm}/^{\circ}\text{C}$ ,  $\pm 250\text{ppm}/^{\circ}\text{C}$

If no requirements for TCR and taping,the standard TCR(highest value in table) will be supplied and packaging is bulk.

## ● Reference Standards

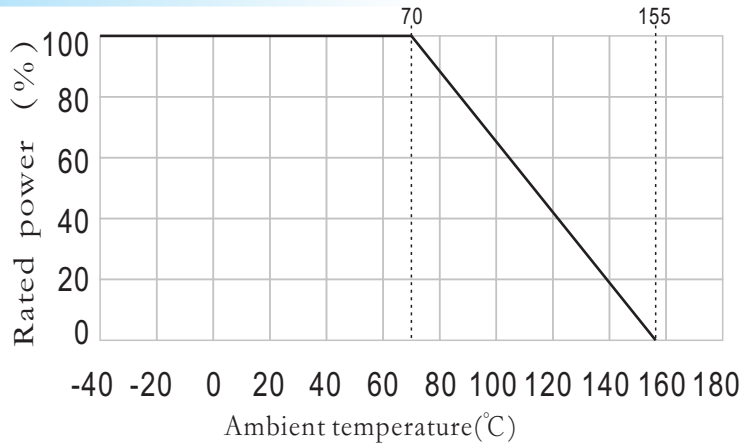
JISC 5201-1

## Applications And Ratings

Type	Power (W) <sup>1)</sup>	Working Voltage(V)		Resistance Range/Tolerances/TCR(ppm/°C) <sup>2)</sup>			
		Trimmed	Untrimmed	0.1R~1R	1R~100R	100R~100K	100K~100M
CRW1210	0.35	200	600	TC250 5/10/20%	TC100/250 1/.../20%	TC50/250 1/.../20%	TC50/1000 1/.../20%
CRW1216	0.5	200	600	TC250 5/10/20%	TC100/250 1/.../20%	TC50/250 1/.../20%	TC50/1000 1/.../20%
CRW2010	0.5	250	900	TC250 5/10/20%	TC100/250 1/.../20%	TC50/250 1/.../20%	TC25/50/100 1/.../20%
CRW2040	1.5	250	900	TC250 5/10/20%	TC100/250 1/.../20%	TC50/250 1/.../20%	TC25/50/100 1/.../20%
CRW2512(M)	1.0	300(1000)	1200(2000)	TC250 5/10/20%	TC100/250 1/.../20%	TC50/250 0.5/.../20%	TC25/50/100 1/.../20%
CRW4020(M)	1.5	500(4000)	1500(6000)	TC250 5/10/20%	TC100/250 1/.../20%	TC50/250 0.5/.../20%	TC25/50/100 1/.../20%

1) At continuous power dissipation the dimensions of solder-pads have to secure sufficient heat-conduction.  
 2) TC25/50: Temperature range +25°C ~ +125°C  
 Zero-Ohm-Jumper: < 50mΩ TCR max.  
 +4000PPM/°C, M at 2512/4020: Meander structure with higher working voltage in bracket. Higher power dissipation, other sizes and specifications on request.

## Derating Curve



## Performance

Test Items	Test Methods(JIS C 5201-1)	
Temperature Range	-55°C ~ 125°C	
Climatic Category	55/125/56	
Solderability	235°C, 2s	
Max. Soldering Temperature	260°C, 10s	
Long Term Stability	10R~100M	<10R
Storage 125°C / 1000h	<0.5%	<1%
Storage 155°C / 1000h	<1%	<2%
Load P <sub>70</sub> /70°C / 1000h	<1%	<2%
Short term overload	<0.25%	<0.5%
Damp heat(56d/40°C / 96%)	<0.5%	<1%