



# CRS-SERIES

## THICK FILM SURGE CURRENT CHIP RESISTOR

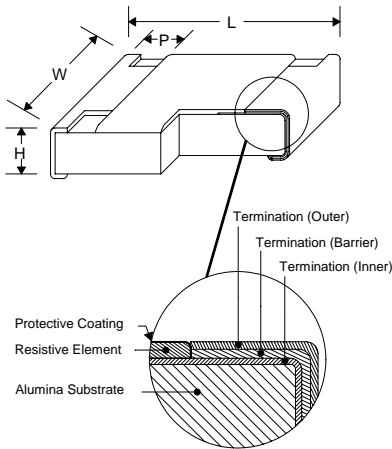
PRECISION RESISTIVE PRODUCTS, INC.  
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PRP HOME PAGE <http://www.prpinc.com>

- Superior Surge Current to CR Series
- Untrimmed Chip Resistor
- E-24 Values with 3 Digit Top Marking
- Standard Industry Case Sizes
- Resistance Tolerances 5%, 10% & 20%
- Wide Ohmic Range ( 0.27R – 22M )
- Temperature Coefficient  $\pm 200\text{PPM}/^\circ\text{C}$

### Dimensions Inches (mm) [Suggested Pad Layouts](#)

Style	L	W	H	P
<b>CRS 0805</b>	0.079 $\pm$ 0.006 (2.00 $\pm$ 0.15)	0.049 $\pm$ 0.006 (1.25 $\pm$ 0.15)	0.020 $\pm$ 0.006 (0.50 $\pm$ 0.15)	0.016 $\pm$ 0.010 (0.40 $\pm$ 0.25)
<b>CRS 1206</b>	0.126 $\pm$ 0.006 (3.20 $\pm$ 0.15)	0.063 $\pm$ 0.006 (1.60 $\pm$ 0.15)	0.024 $\pm$ 0.006 (0.60 $\pm$ 0.15)	0.020 $\pm$ 0.010 (0.50 $\pm$ 0.25)
<b>CRS 1210</b>	0.126 $\pm$ 0.006 (3.20 $\pm$ 0.15)	0.098 $\pm$ 0.006 (2.50 $\pm$ 0.15)	0.024 $\pm$ 0.006 (0.60 $\pm$ 0.15)	0.020 $\pm$ 0.010 (0.50 $\pm$ 0.25)
<b>CRS 2010</b>	0.200 $\pm$ 0.006 (5.00 $\pm$ 0.15)	0.100 $\pm$ 0.006 (2.50 $\pm$ 0.15)	0.024 $\pm$ 0.006 (0.60 $\pm$ 0.15)	0.024 $\pm$ 0.010 (0.60 $\pm$ 0.25)
<b>CRS 2512</b>	0.250 $\pm$ 0.006 (6.30 $\pm$ 0.15)	0.126 $\pm$ 0.006 (3.20 $\pm$ 0.15)	0.024 $\pm$ 0.006 (0.60 $\pm$ 0.15)	0.024 $\pm$ 0.010 (0.60 $\pm$ 0.25)

Operating Temperature Range is  $-55^\circ\text{C}$  to  $+125/155^\circ\text{C}$



### Specifications

Part Size	Wattage @ 70°C	Working Voltage
0805	1/8	150
1206	1/4	200
1210	1/4	200
2010	1/2	200
2512	1	200

### How to Order

[Standard Decade Values](#)

#### Sample Part Number

[Packaging](#)

CRS 0805 T200 10K  $\pm 10\%$

Resistance Tolerance  
Resistance Value  
Temperature Coefficient  
Case Size  
Style

Add "T" at the end of the Case Size portion of the part number for lead free termination.



DEDICATION TO EXCELLENCE

## Performance Data

Load Life	1000 Hrs. @ 70°C	$\Delta R \pm(5.0\% + .1\Omega)$	
Humidity	1000 Hrs. @ 60°C 90~95%RH	$\Delta R \pm(5.0\% + .1\Omega)$	
Moisture Resistance	40°C, 95% RH 56 days	$\Delta R \leq \pm(5.0\% + .1\Omega)$	
Resistance to solder heat	260°C for 5 Sec.	$\Delta R \leq \pm(1.0\% + .05\Omega)$	
Short Time Overload	2.5 X Rated Voltage 2 Sec.	$\Delta R \leq \pm(1.0\% + .05\Omega)$	
Thermal Shock	0805, 1206, 1210	5 Cycles -55°C to 155°C	$\Delta R \leq \pm(1.0\% + .05\Omega)$
	2010, 2512	5 Cycles -55°C to 125°C	$\Delta R \leq \pm(1.0\% + .05\Omega)$
High Temperature Exposure	0805, 1206, 1210	1000 Hrs. 155°C No Load	$\Delta R \leq \pm(5.0\% + .1\Omega)$
	2010, 2512	1000 Hrs. 125°C No Load	$\Delta R \leq \pm(5.0\% + .1\Omega)$
Terminal Strength (Bend)	0805, 1206, 1210	3 mm Bend	$\Delta R \leq \pm(1.0\% + .05\Omega)$
	2010, 2512	1 mm Bend	$\Delta R \leq \pm(1.0\% + .05\Omega)$
Dielectric Withstanding Voltage	500 Vac 60 sec.	No Breakdown $R \geq Gohm$	
Solderability	235°C for 2 sec.	> 95% coverage	
Operating Temperature Range is - 55°C to +125/155°C			

Note: Rated voltage (V) =  $\sqrt{PR}$ .

Maximum working voltage can only be applied to the resistor when resistance value is equal to or greater than the critical resistance value.

## Derating Curve

For resistors operated in ambient above 70°C, power dissipation must be derated in accordance with curve in Figure 1.

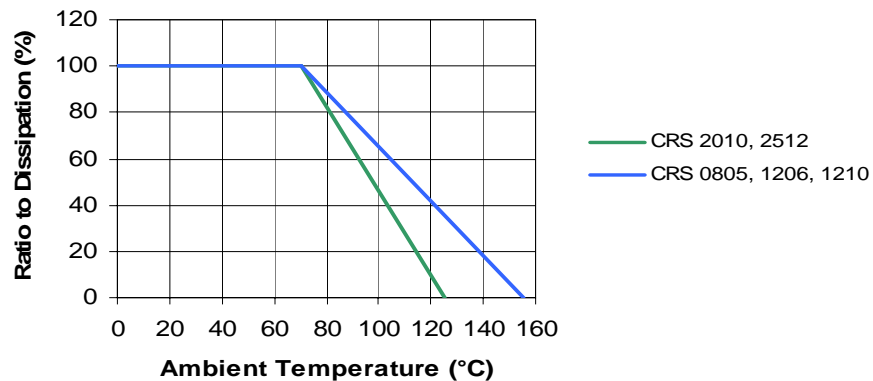


Figure 1

## 1 Pulse Limiting Power Curve (100 ohm)

