



Features

- Low inductance
- High overload capability
- Wide operating temperature range
- High power
- RoHS compliant*

Applications

- Rectifiers
- Inverter drives
- Switching power supplies

PWR413 Series Current Sense Resistors

General Information

The Bourns® PWR413 Series is a through-hole current sense resistor with a high overload capability and a wide operating temperature range.

Performance

Load Life (1000 Hours @ 70 °C) ... $\frac{\Delta R}{R}$ 2.5 %
 Moisture No Load 100 Hours 1 %
 Temperature Cycling
 (-40 °C to +125 °C, 1000 Cycles)...1 %

Electrical Specifications

Power Rating @ 85 °C 1 W, 3 W, 5 W
 Resistance Range0.01 to 0.1 ohms
 (See Standard Resistance Table)
 Temperature Range-55 ° to +325 °C
 Maximum Working Voltage..... $\sqrt{P \cdot R}$
 Short Time Overload
 5 x Rated Power for 5 seconds
 Temperature Coefficient
 ± 900 ppm/°C to ± 60 ppm/°C**
 Packaging.....250 pcs./bag

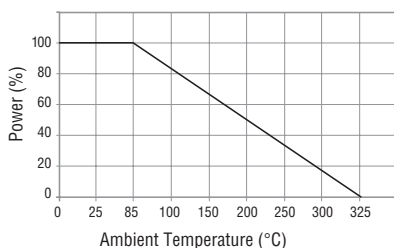
**Dependent on resistor value.

Standard Resistance Table

Resistance Code	Resistance Values		
	1 W	3 W	5 W
R010	0.01	0.01	0.01
R015	N/A	0.015	N/A
R020	0.02	0.02	0.02
R025	0.025	0.025	0.025
R030	0.03	0.03	0.03
R040	N/A	0.04	0.04
R050	0.05	0.05	0.05
R100		0.1	

Other resistance values available upon request.

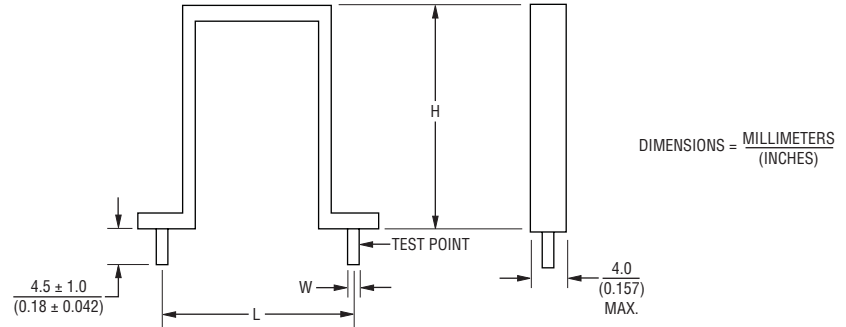
Power Derating Curve



08/09

*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

Product Dimensions



NOTES: Resistance measurement must be made using a 4-wire system and insulated clips attached at the Test Point.
 Terminal Pins are Tin-Plated Copper.

Power Rating (W)	Version	Dimension L	Dim. H (Max.)	Dimension W	Resistance Values (Ω)
1	B	$\frac{11.43 + 1.02/-0.51}{(0.450 + 0.04/-0.02)}$	$\frac{13.5}{(0.59)}$	$\frac{0.8 \pm 0.05}{(0.03 \pm 0.002)}$	0.01 - 0.05
3	C	$\frac{15.24 + 1.02/-0.51}{(0.60 + 0.04/-0.02)}$	$\frac{16.0}{(0.63)}$	$\frac{1.0 \pm 0.05}{(0.04 \pm 0.002)}$	0.01 - 0.1
5	D	$\frac{20.32 + 1.02/-0.51}{(0.80 + 0.04/-0.02)}$	$\frac{26.0}{(1.02)}$	$\frac{1.0 \pm 0.05}{(0.04 \pm 0.002)}$	0.01 - 0.05

How to Order

Model _____

Version _____

B = 1 W
 C = 3 W
 D = 5 W

Resistance Code _____

4 Digits - See Standard Resistance Table

Resistance Tolerance _____

J = 5 %
 F = 1 %

PWR413 D R050 J



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