

## Features

- High current capability
- Low inductance (less than 10 nH)
- Radial leads
- Low ohmic

## Applications

- Power supplies
- UPS
- Motor drives

# PWR4412-2S Series Bare Metal Element Resistor

## General Information

The Bourns® PWR4412-2S Series is a through-hole resistor designed for current shunt and current sensing applications such as power supplies of different kinds, motor drives and many other applications. The resistor is quite rugged, consisting of a special metal alloy welded to tinned copper leads.

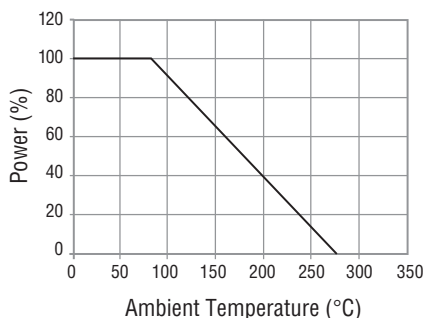
## Performance

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

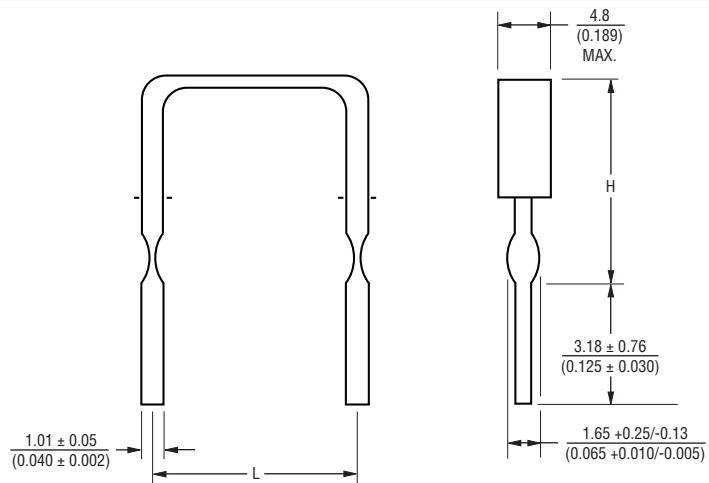
## Electrical Specifications

Power Rating @ 85 °C .....1, 3, 5 W  
 (see matrix)  
 Resistance Range .....0.005 to 0.1 ohms  
 Tolerances Available.....1 %, 5 %  
 Temperature Range.....-55 ° to +270 °C  
 Maximum Working Voltage..... $\sqrt{P \cdot R}$   
 Short Time Overload  
 ..... 5 x Rated Power for 5 seconds  
 Temperature Coefficient of Resistance  
 Wire .....  $\pm 20$  ppm/°C  
 Packaging.....250 pcs./bag

## Power Derating Curve



## Product Dimensions



Power Rating (W)	Version	Dimension L	Dimension H Max.	Resistance Values
1	B	$\frac{11.43 + 1.02/-0.51}{(0.450 + 0.04/-0.02)}$	$\frac{7.62}{(0.30)}$	R0050, R0100, R0200, R0250, R0300, R0400, R0500, R1000
3	C	$\frac{15.24 + 1.02/-0.51}{(0.60 + 0.04/-0.02)}$	$\frac{25.4}{(1.0)}$	R0050, R0100, R0150, R0200, R0250, R0300, R0400, R0500, R1000
5	D	$\frac{20.32 + 1.02/-0.51}{(0.80 + 0.04/-0.02)}$	$\frac{25.4}{(1.0)}$	R0050, R0100, R0150, R0200, R0250, R0300, R0500, R1000

Note: Terminal pins are tin plated copper.

DIMENSIONS:  $\frac{\text{MM}}{\text{(INCHES)}}$

## How to Order

Model PWR4412-2S  
 Version B  
 Resistance Value for All Tolerances R0300  
 "R" represents decimal point (examples: R0050 = 5 milliohms; R1000 = 100 milliohms)  
 Absolute Tolerance J  
 J = 5 %  
 F = 1 %

# BOURNS®

Asia-Pacific: Tel: +886-2 2562-4117 • Fax: +886-2 2562-4116

EMEA: Tel: +36 88 520 390 • Fax: +36 88 520 211

The Americas: Tel: +1-951 781-5500 • Fax: +1-951 781-5700

[www.bourns.com](http://www.bourns.com)

REV. 02/14

\*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.

Specifications are subject to change without notice.

The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time. Users should verify actual device performance in their specific applications.