


## Features

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

## Applications

- Rectifiers
- Inverter drives
- Switching power supplies

# PWR4413 Series Current Sense Resistors

### General Information

The Bourns® PWR4413 Series is a through-hole current sense resistor with a high overload capability and a wide operating temperature range.

### Performance

| | ΔR |
|---|---|
| Load Life (1000 Hours @ 70 °C) | 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 Range .....0.01 to 0.1 ohms
(See Standard Resistance Table)
Temperature Range .....-55 ° to +325 °C
Maximum Working Voltage.....√P*R
Short Time Overload
..... 5 x Rated Power for 5 seconds
Temperature Coefficient
.....±900 ppm/°C to ±60 ppm/°C**
Packaging.....250 pcs./bag

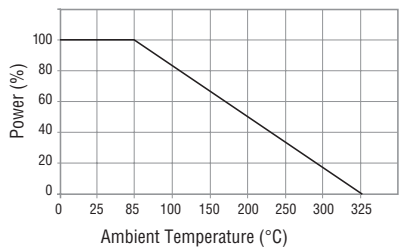
**Dependent on resistor value.

### Standard Resistance Table

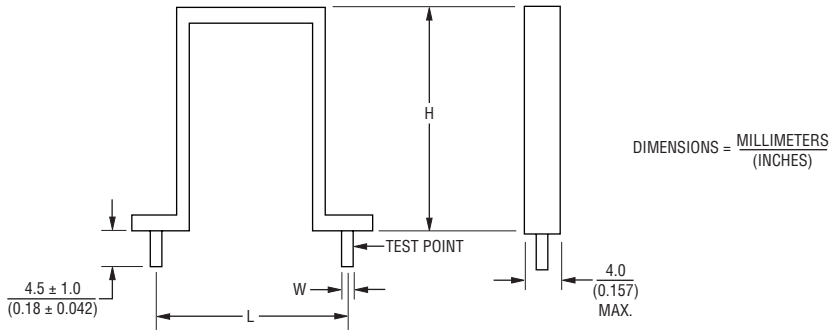
| Resistance Code | Resistance Values | | |
|---|---|---|---|
| | 1 W | 3 W | 5 W |
| R010 | 0.01 | 0.01 | 0.01 |
| R015 | N/A | 0.015 | N/A |
| R020 | 0.02 | 0.02 | 0.02 |
| R025 | 0.025 | 0.025 | 0.025 |
| R030 | 0.03 | 0.03 | 0.03 |
| R040 | N/A | 0.04 | 0.04 |
| R050 | 0.05 | 0.05 | 0.05 |
| R100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

Other resistance values available upon request.

### Power Derating Curve




### 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 | 11.43 +1.02/-0.51 (0.450 +0.04/-0.02) | 13.5 (0.59) | 0.8 ± 0.05 (0.03 ± 0.002) | 0.01 - 0.05 |
| 3 | C | 15.24 +1.02/-0.51 (0.60 +0.04/-0.02) | 16.0 (0.63) | 1.0 ± 0.05 (0.04 ± 0.002) | 0.01 - 0.1 |
| 5 | D | 20.32 +1.02/-0.51 (0.80 +0.04/-0.02) | 26.0 (1.02) | 1.0 ± 0.05 (0.04 ± 0.002) | 0.01 - 0.05 |

### How to Order

**PWR4413 D R050 J**

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 %

**Asia-Pacific:**
Tel: +886-2 2562-4117 • Fax: +886-2 2562-4116
**Europe:**
Tel: +41-41 768 5555 • Fax: +41-41 768 5510
**The Americas:**
Tel: +1-951 781-5500 • Fax: +1-951 781-5700
**www.bourns.com**

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