



Features

- Power ratings from 0.5 - 3 watts
- Large terminals and optimized body shape for power dissipation
- Excellent surge capabilities
- Low TCR
- RoHS compliant*

Applications

- Telecommunications
- Audio equipment
- Medical equipment
- Base stations
- Industrial equipment

PWR2010/3014/4318/5322 - Surface Mount Wirewound Resistors

General Information

The PWR2010/3014/4318/5322 Series surface mount wirewound resistors boast a high power density and excellent pulse power characteristics. They can be used in a wide range of applications where surge voltages or inrush currents are present.

Electrical Characteristics

Parameter	PWR2010	PWR3014	PWR4318	PWR5322
Power	0.5 W	1.0 W	2.0 W	3.0 W
Resistance Range (E24 Values)	0.1 Ω - 1K Ω	0.1 Ω - 4K Ω	0.1 Ω - 8K Ω	0.1 Ω - 15K Ω
Tolerance	0.5 % / 1 % / 5 %			
Temperature Coefficient 0.1 - 0.99 Ω 1.0 - 10 Ω >10 Ω	± 90 PPM/ $^{\circ}$ C ± 50 PPM/ $^{\circ}$ C ± 20 PPM/ $^{\circ}$ C			
Operating Temperature	-55 $^{\circ}$ to 155 $^{\circ}$ C			
Maximum Voltage	$\sqrt{P \cdot R}$			

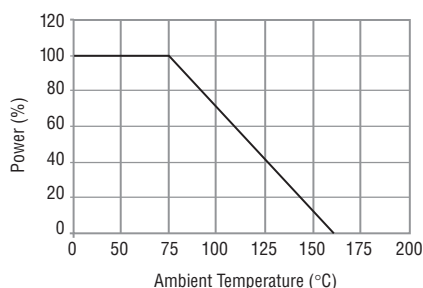
Environmental Characteristics

Test	Description	Specification
Thermal Shock	-55 $^{\circ}$ C/-3 $^{\circ}$ C to 150 $^{\circ}$ C +3 $^{\circ}$ C/-0 $^{\circ}$ C, 5 cycles, with minimum 15 minutes at each cycle	$\Delta R \pm(2.0 \% +0.05 \Omega)$
Short Time Overload	Five times rated power for 5 seconds	$\Delta R \pm(0.5 \% +0.05 \Omega)$
Solderability	Immersion in solder 260 $^{\circ}$ C ± 5 $^{\circ}$ C for 5 ± 0.5 seconds	90 % of contact covered in solder
Resistance to Solder Heat	Immersion in solder 260 $^{\circ}$ C ± 5 $^{\circ}$ C for 5 ± 0.5 seconds	$\Delta R \pm(0.5 \% +0.05 \Omega)$
Dielectric Strength	Test voltage >500 Vrms for greater than 1 minute	Pass
Insulation Resistance	Test voltage greater than 500 Vrms for one minute	>1000 G Ω
High Temperature Exposure	Ambient temperature of 175 $^{\circ}$ C +5 $^{\circ}$ C/-0 $^{\circ}$ C for 250 ± 8 hours	$\Delta R \pm(2.0 \% +0.05 \Omega)$
Low Temperature Exposure	Ambient Temperature of -65C ± 2 C for 24 hours ± 4 hours	$\Delta R \pm(2.0 \% +0.05 \Omega)$
Load Life	Rated continuous voltage for 1000 hours (1 hour on and 0.5 hours off) at a test temperature of 70 $^{\circ}$ C ± 2 $^{\circ}$ C	$\Delta R \pm(2.0 \% +0.05 \Omega)$

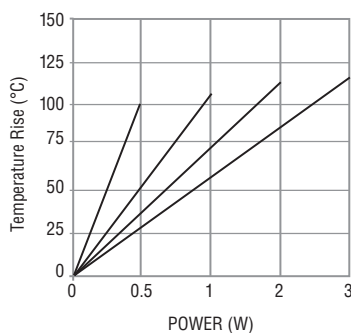
Physical Characteristics

Body Material..... Epoxy resin
Lead Frame 100 % Sn Plated Copper

Power Derating Curve



Temperature Rise



BOURNS®

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Tel: +41-41 768 5555
Fax: +41-41 768 5510

The Americas:

Tel: +1-951 781-5500
Fax: +1-951 781-5700

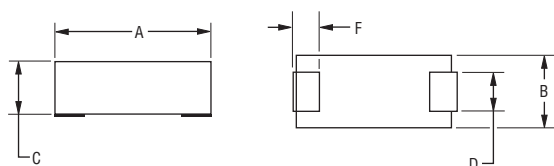
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*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.
Specifications are subject to change without notice.
Customers should verify actual device performance in their specific applications.

PWR2010/3014/4318/5322 - Surface Mount Wirewound Resistors

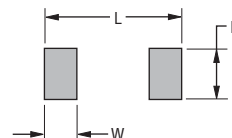
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Product Dimensions



DIMENSIONS: $\frac{\text{MM}}{(\text{INCHES})}$
TOLERANCE: $\pm \frac{0.508}{(0.02)}$

Recommended Pad Layout

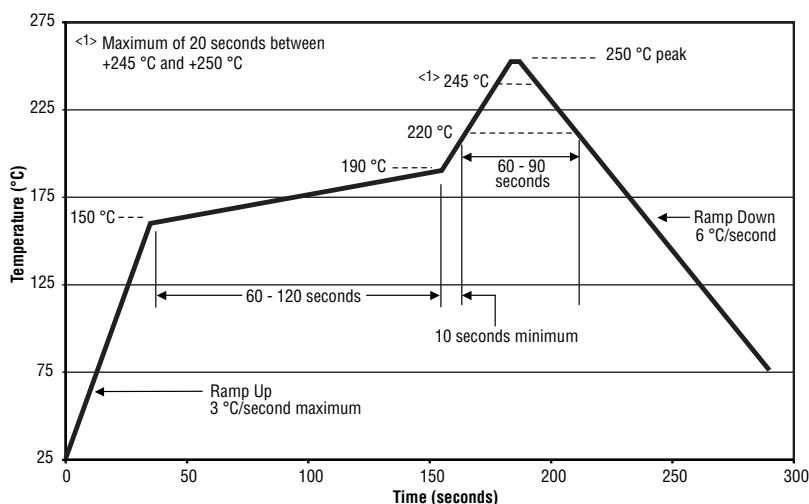


Model	A	F	L	C	B	D	W	H
PWR2010	$\frac{5.08}{(0.20)}$	$\frac{1.28}{(0.05)}$	$\frac{6.48}{(0.255)}$	$\frac{3.25}{(0.128)}$	$\frac{2.54}{(0.10)}$	$\frac{1.663}{(0.065)}$	$\frac{1.98}{(0.078)}$	$\frac{2.16}{(0.085)}$
PWR3014	$\frac{7.5}{(0.29)}$	$\frac{1.75}{(0.069)}$	$\frac{8.9}{(0.35)}$	$\frac{4.64}{(0.183)}$	$\frac{3.50}{(0.138)}$	$\frac{2.405}{(0.095)}$	$\frac{2.45}{(0.096)}$	$\frac{2.95}{(0.116)}$
PWR4318	$\frac{11.0}{(0.43)}$	$\frac{2.00}{(0.079)}$	$\frac{12.5}{(0.49)}$	$\frac{4.65}{(0.189)}$	$\frac{4.50}{(0.177)}$	$\frac{3.590}{(0.141)}$	$\frac{3.20}{(0.126)}$	$\frac{3.70}{(0.146)}$
PWR5322	$\frac{13.5}{(0.53)}$	$\frac{2.50}{(0.098)}$	$\frac{14.9}{(0.587)}$	$\frac{5.65}{(0.229)}$	$\frac{5.50}{(0.217)}$	$\frac{4.20}{(0.165)}$	$\frac{3.70}{(0.146)}$	$\frac{4.20}{(0.165)}$

Packaging Specifications

Model	Tape Width	Reel Diameter	Pieces per Reel	Bulk Pkg. Quantity
PWR2010	$\frac{12.0}{(0.472)}$	$\frac{330}{(13.0)}$	2500	200
PWR3014	$\frac{16.0}{(0.629)}$		1500	200
PWR4318	$\frac{24.0}{(0.945)}$		1500	100
PWR5322	$\frac{24.0}{(0.945)}$		1500	100

Soldering Profile



Typical Part Marking



How to Order

PWR4318 W 10R0 J E

Model _____
PWR2010
PWR3014
PWR4318
PWR5322

Type _____
W = Wirewound

Special Version _____
Blank = Default

Resistance Value _____
<100 ohms ... "R" represents decimal point (examples: 7R50 = 7.5 Ω; R050 = 0.050 Ω)
≥100 ohms... First three digits are significant, fourth digit represents number of zeros to follow (examples: 2000 = 200 ohms; 2002 = 20K ohms)

Resistance Tolerance _____
J = 5 %
F = 1 %
D = 0.5 %

Packaging _____
E = Tape & Reel
Blank = Bulk

REV. 12/12

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Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Bourns:

PWR5322W4R70JE	PWR4318WR220JE	PWR3014W6200JE	PWR5322W1R80JE	PWR5322W4R70J
PWR5322W4700JE	PWR2010WR100FE	PWR4318WR560JE	PWR4318W4020FE	PWR4318W3900FE
PWR2010W47R0JE	PWR5322W10R0JE	PWR5322W5R10JE	PWR4318W1000JE	PWR5322W1800JE
PWR5322WR750JE	PWR4318WR500JE	PWR3014WR100JE	PWR3014W1000JE	PWR5322WR100JE
PWR3014W7R50JE	PWR2010W10R0JE	PWR4318W7R50JE	PWR4318W33R0J	PWR5322W80R6FE
PWR2010W1800JE	PWR4318W5R10JE	PWR4318W2R20JE	PWR4318WR250JE	PWR2010W2R20JE
PWR4318W1R10F	PWR2010W1000JE	PWR3014WA4R70JE	PWR5322W3900JE	PWR4318W39R0JE
PWR2010WR100JE	PWR4318WR510JE	PWR2010W4R70JE	PWR3014WR680FE	PWR4318W3900JE
PWR2010WR750JE	PWR4318W1001JE	PWR5322W1620FE	PWR3014W24R0JE	PWR2010W36R5FE
PWR2010WR500JE	PWR5322W75R0JE	PWR4318W2500JE	PWR4318W1R00JE	PWR4318W82R0JE
PWR5322W2R70JE	PWR3014WR200JE	PWR5322W1502JE	PWR5322W5R00JE	PWR3014W20R0FE
PWR4318W47R0JE	PWR5322W7R50JE	PWR2010W33R0JE	PWR5322W24R0JE	PWR3014W47R0JE
PWR4318W75R0JE	PWR3014W20R0JE	PWR4318WR750JE	PWR5322W4990FE	PWR2010W5R00JE
PWR4318W10R0JE	PWR3014W5R00JE	PWR4318W20R0JE	PWR5322W20R0JE	PWR2010W1001FE
PWR3014W1R00JE	PWR3014W2R00JE	PWR2010W7R50JE	PWR5322W1300JE	PWR3014W10R0JE
PWR4318W4R70JE	PWR4318WR100JE	PWR5322W1R00JE	PWR4318WR470JE	PWR5322W1000JE
PWR3014WR750JE	PWR5322WR500JE	PWR4318W3R90JE	PWR5322W47R0JE	PWR5322WR250JE
PWR2010WR250JE	PWR3014WA1R50JE	PWR4318WR600F	PWR4318W4700JE	PWR4318W33R0JE
PWR5322WR510JE	PWR4318WR200JE	PWR5322W3R90JE	PWR2010W24R0JE	PWR2010W15R0JE
PWR5322W1500JE	PWR3014W75R0JE	PWR4318W24R0JE	PWR4318W2R00JE	PWR4318W5R00JE