

Features

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

Applications

- Telecommunications
- Audio equipment
- Medical equipment (low/medium risk)**
- 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.

Additional Information

Click these links for more information:

PRODUCT | TECHNICAL LIBRARY | INVENTORY | SAMPLES | CONTACT

Electrical Characteristics

Parameter	PWR2010	PWR3014	PWR4318	PWR5322
Power	0.5 W	1.0 W	2.0 W	3.0 W
Resistance Range 1 % Based on E24+E96 Series 5 % Based on E24 Series	0.05 Ω - 500 Ω	0.05 Ω - 4.2K Ω	0.05 Ω - 6K Ω	0.05 Ω - 10K Ω
Resistance Range (Non-inductive Versions) Based on E24 Series	0.05 Ω - 120 Ω	0.05 Ω - 500 Ω	0.05 Ω - 1.5K Ω	0.05 Ω - 2.2K Ω
Tolerance	0.5 % / 1 % / 5 %			
Temperature Coefficient <0.1 Ω 0.1 - 0.99 Ω 1.0 - 10 Ω >10 Ω	 ±200 PPM/°C ±90 PPM/˚C ±50 PPM/˚C ±20 PPM/˚C			
Operating Temperature	-55 ˚ to +155 ˚C			
Maximum Voltage	√P*R			

Environmental Characteristics

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

WARNING Cancer and Reproductive Harm - www.P65Warnings.ca.gov

*RoHS Directive 2015/863, Mar 31, 2015 and Annex.

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Environmental Characteristics (Cont'd)

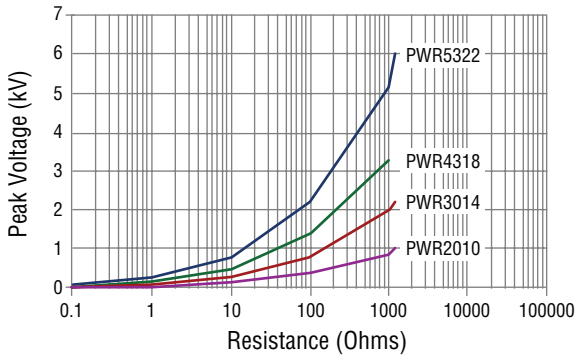
Moisture Sensitivity Level.....1
ESD Classification (HBM).....N/A

Physical Characteristics

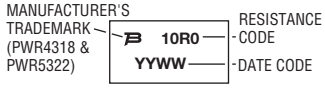
Body Material..... Epoxy resin
Lead Frame .... 100 % Sn Plated Copper
Flammability ..... Conforms to UL 94V-0

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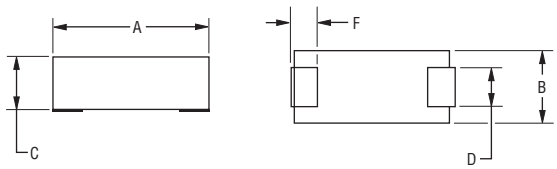
Surge Performance (IEC 61000-4-5 1.2 μs / 50 μs)



Typical Part Marking



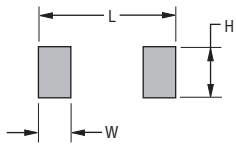
Product Dimensions



DIMENSIONS: MM (INCHES)

TOLERANCE: ± 0.508 (0.02)

Recommended Pad Layout



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

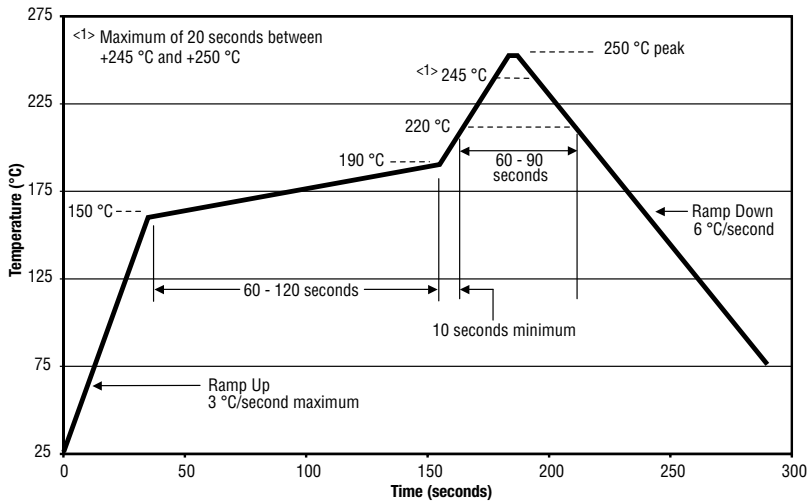
Packaging Specifications

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

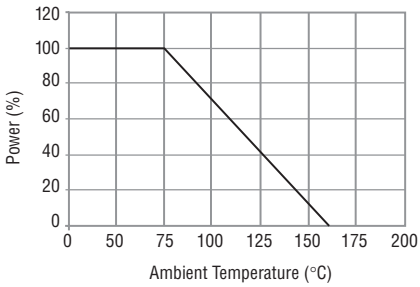
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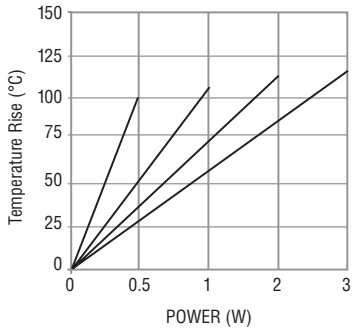
Soldering Profile



Power Derating Curve



Temperature Rise



How to Order

PWR4318 W __ 10R0 J E

Model
- PWR2010
- PWR3014
- PWR4318
- PWR5322

Type
- W = Wirewound
- N = Non-inductive Option

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

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