

Features

- Fuses safely at 220/240 mains voltage
- Resistance values as high as 2.2K ohms
- Flame-proof silicone coating
- Low TCR
- RoHS compliant*
- Agency approval: [®]



This series is not recommended for new designs.

PWR4522 Fusible Power Resistors

General Introduction

The PWR4522A Series of axial leaded wirewound resistors in a flameproof silicone coating are designed to fuse under abnormal conditions such as sudden surges in voltage or circuit malfunctions. The resistor will fuse instantly upon the application of 220/240 mains voltage without flame or incandescent particles.

Electrical Characteristics

Characteristic	Model PWR4522
Power	3 W
Resistance Range	8.2 ohms to 2.2K ohms (E12)
Tolerance	5 %
Temperature Coefficient	±90 PPM/°C
Operating Temperature Range	-55 °C to +350 °C
Maximum Voltage	$\sqrt{P \cdot R}$
Fusing Point	16X Rated Power
Fusing Time	45 Seconds Max.**

** The resistor will fuse safely if 220/240 mains voltage is applied. The time to fuse depends on the resistance value.

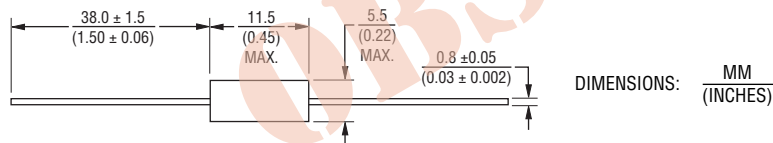
Agency Approval

Description	
UL	File Number: E349323 UL Approved at 120 Vac

Materials

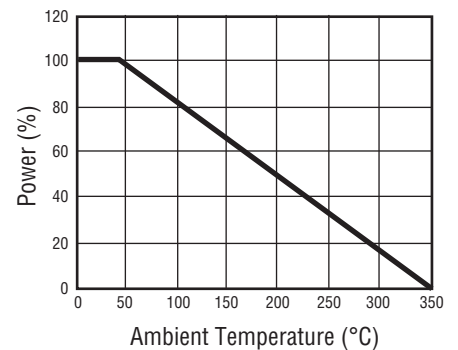
Resistor Wirewound around a ceramic core
 Lead Frame Tinned copper
 Housing Flameproof thermocoat

Product Dimensions



For Standard Values Used in Capacitors, Inductors, and Resistors, click here.

Power Derating Curve



How to Order

PWR 4522 A S 8R20 J A

Model _____
 PWR = Power Resistor

Package _____
 4522 = Size (0.45 x 0.22 inches)

Pin Style _____
 A = Axial Through-hole

Version _____
 S = Safety Version (Fuses without flames or explosion when 220/240 mains voltage is applied)

Resistance Value _____
 R < 100 ohms "R" represents decimal point
 R ≥ 100 ohms First three digits are significant, fourth digit represents number of zeros to follow

Resistance Tolerance _____
 J = ±5 %

Packaging _____
 A = Ammo Pack (750 pcs. per pack)

*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.

Applications

- White goods
- Inverters
- Lighting
- Metering

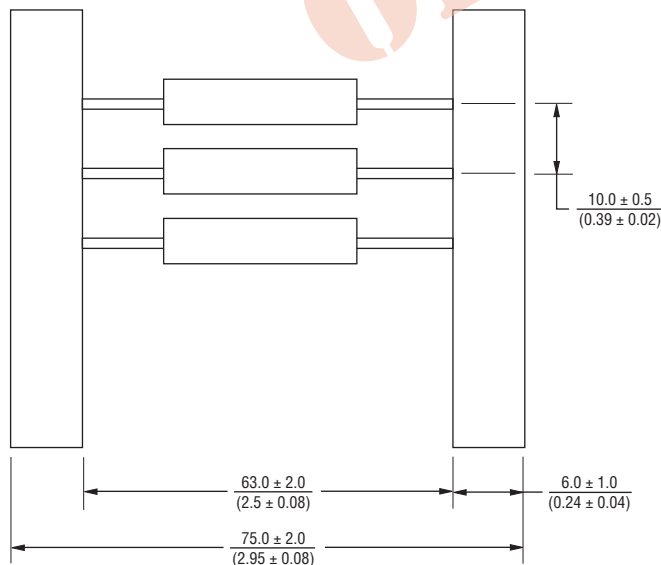
PWR4522 Fusible Power Resistors

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Environmental Characteristics

Test	Description	Specification
Dielectric Withstanding Voltage	Based on limiting voltage x 2 for 60 seconds	$\Delta R \pm (1 \% + 0.05 \Omega)$ - No flashover, mechanical damage, arcing or insulation breakdown
Thermal Shock	-55 °C +0 °C/-3 °C to room temperature to +200 °C +3 °C/-0 °C, 5 cycles, with minimum 15 minutes at each cycle	$\pm(2.0 \% + 0.05 \Omega)$
Short Time Overload	Five times rated power for 5 seconds	$\pm(2.0 \% + 0.05 \Omega)$
Solderability	As per IEC 60068 – 2 -20	Must meet all requirements
Resistance to Solder Heat	Immersion in solder +260 °C to +270 °C for 10 \pm 0.5 seconds	$\pm(0.5 \% + 0.05 \Omega)$
Dielectric Strength	Test voltage >2X maximum voltage for greater than 1 minute	$\pm(2.0 \% + 0.05 \Omega)$
Insulation Resistance	Test voltage greater than 500 V rms for one minute	>1000 G Ω
Humidity	+40 °C at 93 % RH for 1000 hours no load +5 °C	$\pm(5.0 \% + 0.05 \Omega)$
Load Life	Rated continuous voltage for 1000 hours 1 hour on and 0.5 hours off at a test temperature of +70 °C \pm 2 °C	$\pm(5.0 \% + 0.05 \Omega)$

Packaging Specifications



Ammo Pack Box	Master Box	Quantity	
		Ammo Pack	Master Box
$\frac{275 \times 100 \times 110}{(10.8 \times 3.94 \times 4.33)}$	$\frac{450 \times 290 \times 330}{(17.72 \times 11.42 \times 12.99)}$	750	6000

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

REV. 12/13

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