

## Features

- Low TCR (75 ppm/°C)
- High current capability
- Ultra low resistance values

## Applications

- Power supplies
- Motor drives
- Electricity metering

## PWR3920 S Series Power Resistor

### Electrical Characteristics

Parameter	Value	Unit
Resistance Range	0.2, 0.3, 0.5, 1.0, 2.0, 3.0, 4.0	milliohms
Power Rating @ 70 °C	3.0	W
Tolerance	1, 5	%
Temperature Coefficient (TCR)	±75	PPM/°C
Operating Temperature	-65 to +170	°C
Maximum Operating Voltage	$\sqrt{PxR}$	

### General Information

The Bourns® PWR3920 Series is a surface mount shunt resistor offering up to 3 W of power and very low resistance values as well as excellent TCR characteristics. It is designed for applications such as motor drives and power supplies.

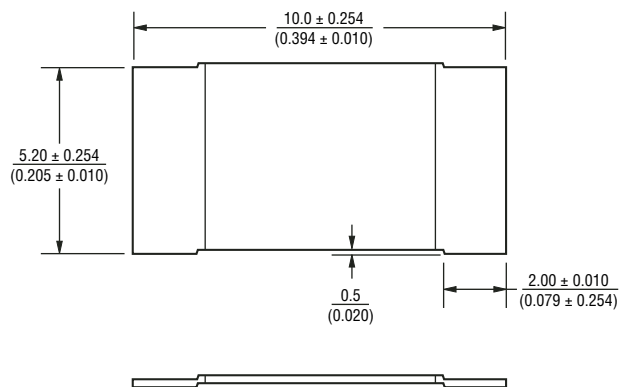
### Environmental Characteristics

Description	Method	Limit ( $\Delta R$ )
Short Time Overload	5 x Rated Power for 5 Seconds	± (1.0 % +0.0005 $\Omega$ )
High Temperature Storage	1000 Hours at + 175 °C	± (1.0 % +0.0005 $\Omega$ )
Vibration	Frequency varied 10 to 2000 Hz in 1 Minute, 3 Directions, 12 Hours	± (0.5 % +0.0005 $\Omega$ )
Mechanical Shock	100 g for 6 Milliseconds, 5 Pulses	± (0.5 % +0.0005 $\Omega$ )
Load Life	1000 Hours at + 70 °C, 1.5 Hours "ON", 0.5 Hours "OFF"	± (0.5 % +0.0005 $\Omega$ )
Bias Humidity	+85 °C, 85 % RH, 10 % Bias, 1000 Hours	± (0.5 % +0.0005 $\Omega$ )
Resistance to Solder Heat	+ 260 °C Solder, 10 - 12 Second Dwell, 25 mm/Second	± (0.5 % +0.0005 $\Omega$ )
Low Temperature Storage	-65 °C for 45 Minutes	± (0.5 % +0.0005 $\Omega$ )
Load Life	$\sqrt{PxR}$ for 1000 Hours, 1.5 Hours "ON", 0.5 Hours "OFF"	± (1.0 % +0.0005 $\Omega$ )
Moisture Resistance	MIL-STD-202, Method 106, 0 % Power, 7a and 7b Not Required	± (0.5 % +0.0005 $\Omega$ )
Resistance to Soldering Heat	260 °C for 10 Seconds	± (0.5 % +0.0005 $\Omega$ )
Thermal Shock	1000 Cycles from -55 °C to +150 °C, 15 Minutes at Temperature	± (0.5 % +0.0005 $\Omega$ )

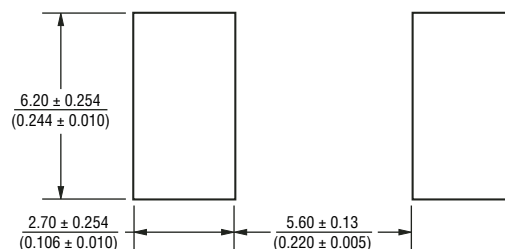
# PWR3920 S Series Power Resistor

**BOURNS®**

## Product Dimensions



## Solder Pads



DIMENSIONS =  $\frac{\text{MILLIMETERS}}{\text{(INCHES)}}$

## How to Order

**PWR 3920 - 2 S B R0040 J E**

Model \_\_\_\_\_  
PWR = Power Resistor

Package \_\_\_\_\_  
3920 = 0.39 x 0.20 inches

Number of Terminals \_\_\_\_\_  
2 = 2

Function \_\_\_\_\_  
S = Shunt

Version \_\_\_\_\_

Resistor Value \_\_\_\_\_  
R (4 Digits)

Absolute Tolerance \_\_\_\_\_  
J = 5 % F = 1 %

Packaging \_\_\_\_\_  
E = Tape & Reel  
\_\_\_ = Bulk

## Packaging Specifications

Tape .....16 mm/Embossed Plastic  
Reel .....330 mm/13 in. diameter  
Pieces per Reel .....3000



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