### 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

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resistance Range</td>
<td>0.2, 0.3, 0.5, 1.0, 2.0, 3.0, 4.0</td>
<td>mOhms</td>
</tr>
<tr>
<td>Power Rating @ 70 °C</td>
<td>3.0</td>
<td>W</td>
</tr>
<tr>
<td>Tolerance</td>
<td>1.5</td>
<td>%</td>
</tr>
<tr>
<td>Temperature Coefficient (TCR)</td>
<td>±75</td>
<td>PPM/°C</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-65 to +170</td>
<td>°C</td>
</tr>
<tr>
<td>Maximum Operating Voltage</td>
<td>(\sqrt{P \times R})</td>
<td></td>
</tr>
</tbody>
</table>

### 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

<table>
<thead>
<tr>
<th>Description</th>
<th>Method</th>
<th>Limit ((\Delta R))</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short Time Overload</td>
<td>5 x Rated Power for 5 Seconds</td>
<td>±(1.0 % +0.0005 Ω)</td>
</tr>
<tr>
<td>High Temperature Storage</td>
<td>1000 Hours at +170 °C</td>
<td>±(1.0 % +0.0005 Ω)</td>
</tr>
<tr>
<td>Vibration</td>
<td>Frequency varied 10 to 2000 Hz in 1 Minute, 3 Directions, 12 Hours</td>
<td>±(0.5 % +0.0005 Ω)</td>
</tr>
<tr>
<td>Mechanical Shock</td>
<td>100 g for 6 milliseconds, 5 Pulses</td>
<td>±(0.5 % +0.0005 Ω)</td>
</tr>
<tr>
<td>Load Life</td>
<td>1000 Hours at +95 °C, 10 Hours “ON”, 0.5 Hours “OFF”</td>
<td>±(0.5 % +0.0005 Ω)</td>
</tr>
<tr>
<td>Bias Humidity</td>
<td>+95 °C, 95 % RH, 10 % Bias, 1000 Hours</td>
<td>±(0.5 % +0.0005 Ω)</td>
</tr>
<tr>
<td>Resistance to Solder Heat</td>
<td>+260 °C Solder, 10 - 12 Second Dwell, 25 mm/Second</td>
<td>±(0.5 % +0.0005 Ω)</td>
</tr>
<tr>
<td>Low Temperature Storage</td>
<td>-65 °C for 45 Minutes</td>
<td>±(0.5 % +0.0005 Ω)</td>
</tr>
<tr>
<td>Load Life</td>
<td>(\sqrt{P \times R}) for 1000 Hours, 1.5 Hours “ON”, 0.5 Hours “OFF”</td>
<td>±(1.0 % +0.0005 Ω)</td>
</tr>
<tr>
<td>Moisture Resistance</td>
<td>MIL-STD-202, Method 106, 0 % Power, 7a and 7b Not Required</td>
<td>±(0.5 % +0.0005 Ω)</td>
</tr>
<tr>
<td>Resistance to Soldering Heat</td>
<td>260 °C for 10 Seconds</td>
<td>±(0.5 % +0.0005 Ω)</td>
</tr>
<tr>
<td>Thermal Shock</td>
<td>1000 Cycles from -55 °C to +150 °C, 15 Minutes at Temperature</td>
<td>±(0.5 % +0.0005 Ω)</td>
</tr>
</tbody>
</table>

Specifications are subject to change without notice.
Customers should verify actual device performance in their specific applications.
PWR3920 S Series Power Resistor

Product Dimensions

How to Order

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

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

Dimensions = MILLIMETERS
MILLIMETERS (INCHES)

Solder Pads

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www.bourns.com

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