SRP0510 Series - Shielded Power Inductors

**Features**
- Shielded construction
- Metal alloy powder core
- High saturation current
- Low buzz noise
- Flat wire
- RoHS compliant* and halogen free**

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**Electrical Specifications @ 25 °C**

<table>
<thead>
<tr>
<th>Bourns Part Number</th>
<th>Inductance @ 100 kHz / 1 V</th>
<th>Q Typ.</th>
<th>Q Test Freq. (MHz)</th>
<th>SRF (MHz) Typ.</th>
<th>DCR (mΩ) Typ.</th>
<th>DCR (mΩ) Max.</th>
<th>Irms (A) Typ.</th>
<th>Isat (A) Typ.</th>
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</thead>
<tbody>
<tr>
<td>SRP0510-R47K</td>
<td>0.47</td>
<td>10</td>
<td>21</td>
<td>25.2</td>
<td>32.5</td>
<td>38.0</td>
<td>5.0</td>
<td>10.5</td>
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<td>43.5</td>
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<td>10</td>
<td>41</td>
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<td>57.0</td>
<td>4.0</td>
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<td>10</td>
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<td>33</td>
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<td>290.0</td>
<td>335.0</td>
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</tbody>
</table>

**Product Dimensions**

**Recommended Layout**

**General Specifications**

- Operating Temperature: -40 °C to +125 °C (Temperature rise included)
- Storage Temperature (Component): -40 °C to +125 °C
- Rated Current: Inductance drops 30% at Isat
- Temperature Rise: 40 °C at rated Irms
- Rated Voltage: 50 V
- Moisture Sensitivity Level: 1
- ESD Classification (HBM): N/A

Note 1: Circuit design, component, PCB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.

**Materials**

- Core: Metal alloy powder
- Wire: Enamelled copper
- Terminal Finish: Sn
- Packaging: 4000 pcs. per 13-inch reel

**How to Order**

SRP0510 - 4R7K

**Value Code (see table)**

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** Bourns considers a product to be “halogen free” if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.

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**WARNING**

Cancer and Reproductive Harm

www.P65Warnings.ca.gov
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Soldering Profile

Peak Temperature: 260 °C max.
Max. Peak Temperature -5 °C: 30 sec. max.
Max. Time Above 217 °C: 60~150 sec. max.

Temperature Rising Area
-4.0 °C/Sec. Max

Preheat Area
150~200 °C / 60~120 Sec.

Reflow Area
+3.0 °C/Sec. Max

Forced Cooling Area
-(1.0~5.0) °C/Sec. Max

Temperature (°C)

0 50 100 150 200 250

Time (Seconds)

0 50 100 150 200 250

Peak Temperature: 260 °C
217 °C
60~120 Sec.
60 Sec. Max.
60~150 Sec.
SRP0510 Series - Shielded Power Inductors

Packaging Specifications

DIMENSIONS: MM

REV. 05/20

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