Features
- Semi-shielded construction
- Low profile: 1.2 mm
- Inductance range: 0.47 to 22 µH
- Rated current up to 3.2 A
- RoHS compliant* and halogen free**

SRN4012 Series - Semi-shielded Power Inductors

Electrical Specifications @ 25 °C

<table>
<thead>
<tr>
<th>Bourns Part No.</th>
<th>Inductance @ 100 KHz / 0.1 V</th>
<th>DCR (Ω)</th>
<th>Irms (A)</th>
<th>Isat (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SRN4012-R47M</td>
<td>0.47 20 0.03 3.2 4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SRN4012-1R0M</td>
<td>1.0 20 0.045 2.2 2.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SRN4012-1R5M</td>
<td>1.5 20 0.06 2 2.2</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>SRN4012-2R2M</td>
<td>2.2 20 0.072 1.9 1.65</td>
<td></td>
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</tr>
<tr>
<td>SRN4012-3R3M</td>
<td>3.3 20 0.101 1.7 1.4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SRN4012-4R7M</td>
<td>4.7 20 0.114 1.5 1.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SRN4012-6R8M</td>
<td>6.8 20 0.15 1.3 0.9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SRN4012-100M</td>
<td>10 20 0.204 1.1 0.8</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>SRN4012-220M</td>
<td>22 20 0.48 0.62 0.5</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Soldering Profile

Preheating: 20-40 Sec.
- 20-40°C

Temperature (°C)

Time (Seconds)
Reflow Times: 3 Times Max.

Electrical Schematic

How to Order

SRN4012 - R47M

Model
Value Code (see table)

General Specifications

Operating Temperature
-40 °C to +125 °C (Temperature rise included)

Storage Temperature
-40 °C to +125 °C

Resistance to Solder Heat
+260 °C for 40 sec.

Temperature Rise
-40 °C at rated Irms
Rated Current
Inductance drops 30 % at Isat

Materials

Core: Ferrite
Wire: Enamelled copper
Terminal Finish: Magnetic epoxy resin
Coating: Sn
Packaging: 4000 pcs. per 13-inch reel

Product Dimensions

Recommended Layout

Preheating
- 20-40°C
- 200 °C
- 150°C
- 60-180 Sec.
- 480 Sec. Max.
- 480 Sec. Max.

Time (Seconds)
Reflow Times: 3 Times Max.

Electrical Schematic

How to Order

SRN4012 - R47M

Model
Value Code (see table)

**Bourns follows the prevailing definition of “halogen free” in the industry. 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.

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.

This series is obsolete and not recommended for new designs. The Model SRN4012T Series is the recommended alternative.
**Applications**

- DC/DC converters
- Notebook computers
- Digital video cameras
- HDDs
- Cellphones
- Televisions, LCD displays

**SRN4012 Series - Semi-shielded Power Inductors**

**L vs. IDC**

<table>
<thead>
<tr>
<th>Model</th>
<th>Inductance (μH)</th>
<th>DC Current (A)</th>
<th>Temperature Rise (°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SRN4012-R47M</td>
<td>0.28 - 1.30</td>
<td>0.2 - 4.0</td>
<td>2.4 - 12.0</td>
</tr>
<tr>
<td>SRN4012-1R0M</td>
<td>0.24 - 1.20</td>
<td>0.2 - 2.0</td>
<td>2.4 - 12.0</td>
</tr>
<tr>
<td>SRN4012-1R5M</td>
<td>0.22 - 1.10</td>
<td>0.2 - 1.5</td>
<td>2.4 - 12.0</td>
</tr>
<tr>
<td>SRN4012-2R2M</td>
<td>0.22 - 1.10</td>
<td>0.2 - 1.5</td>
<td>2.4 - 12.0</td>
</tr>
<tr>
<td>SRN4012-3R3M</td>
<td>0.22 - 1.10</td>
<td>0.2 - 1.5</td>
<td>2.4 - 12.0</td>
</tr>
<tr>
<td>SRN4012-4R7M</td>
<td>0.22 - 1.10</td>
<td>0.2 - 1.5</td>
<td>2.4 - 12.0</td>
</tr>
<tr>
<td>SRN4012-6R8M</td>
<td>0.22 - 1.10</td>
<td>0.2 - 1.5</td>
<td>2.4 - 12.0</td>
</tr>
<tr>
<td>SRN4012-100M</td>
<td>0.12 - 0.62</td>
<td>0.1 - 3.0</td>
<td>2.4 - 12.0</td>
</tr>
</tbody>
</table>

**Applications**

- DC/DC converters
- Notebook computers
- Digital video cameras
- HDDs
- Cellphones
- Televisions, LCD displays

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SRN4012 Series - Semi-shielded Power Inductors

Packaging Specifications

**DIMENSIONS: MM (INCHES)**

- QTY: 4000 PCS. PER REEL

- 12.5 ± 0.5 (0.492 ± 0.020)
- 100.0 ± 2.0 (3.937 ± 0.079)
- 13.5 ± 0.5 (0.531 ± 0.020)
- 1.75 ± 0.1 (0.069 ± 0.004)
- 8.0 ± 0.1 (0.315 ± 0.004)
- 2.0 ± 0.1 (0.079 ± 0.004)
- 3 °30 ° ± 0.35 ± 0.05 (0.014 ± 0.002)
- 5.5 ± 0.1 (0.217 ± 0.004)
- 12.0 ± 0.1 (0.472 ± 0.004)
- 4.9 ± 0.1 (0.197 ± 0.004)

**REVISION 07/15**

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