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

**SRP0412 Series - Shielded Power Inductors**

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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>
</tr>
</thead>
<tbody>
<tr>
<td>SRP0412-R47K</td>
<td>0.47</td>
<td>10</td>
<td>20</td>
<td>25.2</td>
<td>90</td>
<td>13.2</td>
<td>15.3</td>
<td>7.6</td>
</tr>
<tr>
<td>SRP0412-R68K</td>
<td>0.68</td>
<td>10</td>
<td>20</td>
<td>25.2</td>
<td>74</td>
<td>21.3</td>
<td>25.0</td>
<td>5.6</td>
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<tr>
<td>SRP0412-1R0K</td>
<td>1.00</td>
<td>10</td>
<td>45</td>
<td>7.96</td>
<td>55</td>
<td>25.2</td>
<td>29.5</td>
<td>5.3</td>
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<tr>
<td>SRP0412-1R5K</td>
<td>1.50</td>
<td>10</td>
<td>26</td>
<td>7.96</td>
<td>42</td>
<td>36.9</td>
<td>43.3</td>
<td>4.8</td>
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<tr>
<td>SRP0412-2R2K</td>
<td>2.20</td>
<td>10</td>
<td>37</td>
<td>7.96</td>
<td>33</td>
<td>49.0</td>
<td>57.5</td>
<td>4.1</td>
</tr>
<tr>
<td>SRP0412-3R3K</td>
<td>3.30</td>
<td>10</td>
<td>38</td>
<td>7.96</td>
<td>28</td>
<td>80.0</td>
<td>105.0</td>
<td>2.8</td>
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<tr>
<td>SRP0412-4R7K</td>
<td>4.70</td>
<td>10</td>
<td>38</td>
<td>7.96</td>
<td>26</td>
<td>109.0</td>
<td>128.0</td>
<td>2.6</td>
</tr>
<tr>
<td>SRP0412-6R8K</td>
<td>6.80</td>
<td>10</td>
<td>26</td>
<td>7.96</td>
<td>20</td>
<td>191.0</td>
<td>223.0</td>
<td>1.9</td>
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<tr>
<td>SRP0412-100K</td>
<td>10.0</td>
<td>10</td>
<td>20</td>
<td>2.52</td>
<td>15</td>
<td>213.0</td>
<td>250.0</td>
<td>1.7</td>
</tr>
</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

Please consult Bourns® Model SRP-A Series Visual Inspection Guide for detailed construction, processing and testing information.

**How to Order**

| SRP0412 - 4R7K | Model | 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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SRP0412 Series - Shielded Power Inductors

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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)

Time (Seconds)

250

200

150

100

50

0

250

200

150

100

60 Sec. Max.
60–120 Sec.
60–150 Sec.
217 °C
SRP0412 Series - Shielded Power Inductors

Packaging Specifications

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Value (MM)</th>
<th>Value (INCHES)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIA.</td>
<td>330</td>
<td>12.99</td>
</tr>
<tr>
<td>21 ± 0.8</td>
<td>2.0 ± 0.5</td>
<td>(0.827 ± 0.031) (0.79 ± 0.020)</td>
</tr>
<tr>
<td>13.5 ± 0.5</td>
<td>18.4</td>
<td>(0.531 ± 0.020) (0.724)</td>
</tr>
<tr>
<td>50 MIN.</td>
<td>14 MAX.</td>
<td>(1.969) (0.551)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Value (MM)</th>
<th>Value (INCHES)</th>
</tr>
</thead>
<tbody>
<tr>
<td>END</td>
<td>2.0 ± 0.5</td>
<td>(0.79 ± 0.020)</td>
</tr>
<tr>
<td>LEADER NO COMPONENT</td>
<td>3.06 (0.120)</td>
<td>MIN.</td>
</tr>
<tr>
<td>COMPONENTS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TRAILER NO COMPONENT</td>
<td>3.90 (0.153)</td>
<td>MIN.</td>
</tr>
</tbody>
</table>

DIMENSIONS: MM (INCHES)

QTY: 4,000 PCS PER REEL

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EMEA: Tel: +36 88 885 877 • Email: eurocus@bourns.com
The Americas: Tel: +1-951 781-5500 • Email: americus@bourns.com
www.bourns.com

REV. 02/20
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