Features

- Shielded construction
- Metal alloy powder core
- High saturation current
- Low buzz noise
- Inductance range 0.15 to 10 µH
- RoHS compliant* and halogen free**

SRP3012C Series – Shielded Power Inductors

Operating Temperature

- 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

MSL

- 1

ESD Classification (HBM)

- N/A

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

WARNING

Cancer and Reproductive Harm

www.P65Warnings.ca.gov

Electrical Specifications @ 25 °C

<table>
<thead>
<tr>
<th>Bourns Part Number</th>
<th>Inductance @ 100 kHz / 1 V L (µH)</th>
<th>Min. Q @ 100 kHz</th>
<th>SRF (MHz) Typ.</th>
<th>DCR (mΩ) Typ.</th>
<th>I rms (A) Typ.</th>
<th>I sat (A) Typ.</th>
<th>Marking</th>
</tr>
</thead>
<tbody>
<tr>
<td>SRP3012C-R15Y</td>
<td>0.15 ± 30 %</td>
<td>10</td>
<td>180</td>
<td>9.6</td>
<td>11</td>
<td>10</td>
<td>.15H</td>
</tr>
<tr>
<td>SRP3012C-R22M</td>
<td>0.22 ± 20 %</td>
<td>10</td>
<td>140</td>
<td>14</td>
<td>17</td>
<td>8</td>
<td>.22H</td>
</tr>
<tr>
<td>SRP3012C-R33M</td>
<td>0.33 ± 20 %</td>
<td>10</td>
<td>115</td>
<td>16</td>
<td>20</td>
<td>7</td>
<td>.33H</td>
</tr>
<tr>
<td>SRP3012C-R47M</td>
<td>0.47 ± 20 %</td>
<td>10</td>
<td>98</td>
<td>25</td>
<td>30</td>
<td>5</td>
<td>.47H</td>
</tr>
<tr>
<td>SRP3012C-R68M</td>
<td>0.68 ± 20 %</td>
<td>10</td>
<td>75</td>
<td>34</td>
<td>40</td>
<td>4.5</td>
<td>.68H</td>
</tr>
<tr>
<td>SRP3012C-1ROM</td>
<td>1.0 ± 20 %</td>
<td>10</td>
<td>50</td>
<td>50</td>
<td>60</td>
<td>3.3</td>
<td>5.2</td>
</tr>
<tr>
<td>SRP3012C-1R5M</td>
<td>1.5 ± 20 %</td>
<td>10</td>
<td>42</td>
<td>71</td>
<td>85</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>SRP3012C-2R2M</td>
<td>2.2 ± 20 %</td>
<td>10</td>
<td>38</td>
<td>98</td>
<td>115</td>
<td>2.7</td>
<td>3.2</td>
</tr>
<tr>
<td>SRP3012C-3R3M</td>
<td>3.3 ± 20 %</td>
<td>10</td>
<td>34</td>
<td>172</td>
<td>198</td>
<td>2</td>
<td>2.6</td>
</tr>
<tr>
<td>SRP3012C-4R7M</td>
<td>4.7 ± 20 %</td>
<td>10</td>
<td>31</td>
<td>245</td>
<td>282</td>
<td>1.6</td>
<td>2.3</td>
</tr>
<tr>
<td>SRP3012C-5R6M</td>
<td>5.6 ± 20 %</td>
<td>10</td>
<td>27</td>
<td>310</td>
<td>360</td>
<td>1.5</td>
<td>2</td>
</tr>
<tr>
<td>SRP3012C-6R8M</td>
<td>6.8 ± 20 %</td>
<td>10</td>
<td>26</td>
<td>360</td>
<td>400</td>
<td>1.4</td>
<td>1.8</td>
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<tr>
<td>SRP3012C-8R2M</td>
<td>8.2 ± 20 %</td>
<td>10</td>
<td>25</td>
<td>420</td>
<td>463</td>
<td>1.2</td>
<td>1.5</td>
</tr>
<tr>
<td>SRP3012C-100M</td>
<td>10 ± 20 %</td>
<td>10</td>
<td>24</td>
<td>450</td>
<td>520</td>
<td>1.1</td>
<td>1.4</td>
</tr>
</tbody>
</table>

General Specifications

- Operating Temperature -40 °C to +125 °C
- Storage Temperature (Component) -40 °C to +125 °C
- Rated Current
  - Inductance drops 30 % at Isat
- Temperature Rise
  - 40 °C at rated Irms
- MSL
  - 1
- ESD Classification (HBM)
  - N/A

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

Materials

Core
- Metal alloy powder

Wire
- Enameled copper

Terminal Finish
- Sn

Packaging
- 4000 pcs. per 13-inch reel

How to Order

SRP3012C  -  100M

Model

Value Code (see table)

Recommended Layout

Dimensions:

<table>
<thead>
<tr>
<th>DIMENSIONS:</th>
<th>MM</th>
<th>INCHES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0 ± 0.2</td>
<td>(.039 ± .008)</td>
<td></td>
</tr>
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<td>1.0 ± 0.2</td>
<td>(.039 ± .008)</td>
<td></td>
</tr>
</tbody>
</table>

Dimensions:

<table>
<thead>
<tr>
<th>DIMENSIONS:</th>
<th>MM</th>
<th>INCHES</th>
</tr>
</thead>
<tbody>
<tr>
<td>.08 ± .04</td>
<td>(.031 ± .016)</td>
<td></td>
</tr>
<tr>
<td>12 ± 0.2</td>
<td>(.047 ± .008)</td>
<td></td>
</tr>
</tbody>
</table>

* 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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Users should verify actual device performance in their specific applications.

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SRP3012C Series – Shielded Power Inductors

Soldering Profile

PRE-HEATING

SOLDERING

T_p (260 °C / 10 seconds max.)

NATURAL COOLING

REFLOW TIMES: 3 MAX.

L vs. I Charts

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L vs. I Charts (Continued)

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SRP3012C Series – Shielded Power Inductors

Packaging Specifications

DIMENSIONS: MM (INCHES)

QTY: 4,000 PCS PER REEL

REV. 05/22
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