SRP7028CC Series - Shielded Power Inductors

Features
- Shielded construction
- Carbonyl powder core
- High saturation current
- Low radiation
- Low buzz noise
- RoHS compliant* and halogen free**

Electrical Specifications @ 25 °C

<table>
<thead>
<tr>
<th>Bourns Part No.</th>
<th>Inductance @ 100 kHz / 1 V</th>
<th>Typical</th>
<th>Q Min.</th>
<th>SRF (MHz)</th>
<th>DCR (mΩ) Typ.</th>
<th>DCR (mΩ) Max.</th>
<th>Ims (A) Typ.</th>
<th>Isat (A) Typ.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SRP7028CC-R10Y</td>
<td>0.10</td>
<td>30</td>
<td>5</td>
<td>300</td>
<td>1.2</td>
<td>1.7</td>
<td>37.5</td>
<td>60.0</td>
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<tr>
<td>SRP7028CC-R15Y</td>
<td>0.15</td>
<td>30</td>
<td>5</td>
<td>220</td>
<td>1.5</td>
<td>1.9</td>
<td>27.0</td>
<td>50.0</td>
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<tr>
<td>SRP7028CC-R22Y</td>
<td>0.22</td>
<td>30</td>
<td>5</td>
<td>150</td>
<td>2.2</td>
<td>2.6</td>
<td>25.0</td>
<td>40.0</td>
</tr>
<tr>
<td>SRP7028CC-R25M</td>
<td>0.25</td>
<td>20</td>
<td>10</td>
<td>150</td>
<td>2.5</td>
<td>3.1</td>
<td>23.0</td>
<td>39.0</td>
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<tr>
<td>SRP7028CC-R33M</td>
<td>0.33</td>
<td>20</td>
<td>10</td>
<td>140</td>
<td>3.5</td>
<td>3.9</td>
<td>20.0</td>
<td>32.0</td>
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<tr>
<td>SRP7028CC-R47M</td>
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<td>20</td>
<td>10</td>
<td>80</td>
<td>4.0</td>
<td>4.3</td>
<td>17.5</td>
<td>27.0</td>
</tr>
<tr>
<td>SRP7028CC-R68M</td>
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<td>20</td>
<td>15</td>
<td>67</td>
<td>4.8</td>
<td>5.5</td>
<td>15.5</td>
<td>25.0</td>
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<tr>
<td>SRP7028CC-1R0M</td>
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<td>20</td>
<td>20</td>
<td>58</td>
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<td>11.0</td>
<td>22.0</td>
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<td>SRP7028CC-1R5M</td>
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<td>14</td>
<td>9.0</td>
<td>18.0</td>
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<td>SRP7028CC-2R2M</td>
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<td>20</td>
<td>20</td>
<td>32</td>
<td>15</td>
<td>18</td>
<td>8.0</td>
<td>14.0</td>
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<tr>
<td>SRP7028CC-3R3M</td>
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<td>20</td>
<td>20</td>
<td>25</td>
<td>27</td>
<td>30</td>
<td>6.0</td>
<td>13.5</td>
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<tr>
<td>SRP7028CC-4R7M</td>
<td>4.7</td>
<td>20</td>
<td>20</td>
<td>21</td>
<td>37</td>
<td>40</td>
<td>5.5</td>
<td>10.0</td>
</tr>
<tr>
<td>SRP7028CC-6R8M</td>
<td>6.8</td>
<td>20</td>
<td>20</td>
<td>18</td>
<td>54</td>
<td>60</td>
<td>4.5</td>
<td>8.3</td>
</tr>
<tr>
<td>SRP7028CC-8R2M</td>
<td>8.2</td>
<td>20</td>
<td>20</td>
<td>17</td>
<td>60</td>
<td>66</td>
<td>4.1</td>
<td>6.8</td>
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<td>SRP7028CC-100M</td>
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<td>20</td>
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<td>68</td>
<td>3.5</td>
<td>6.0</td>
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<td>12</td>
<td>107</td>
<td>123</td>
<td>3.0</td>
<td>4.0</td>
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<td>SRP7028CC-220M</td>
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<td>20</td>
<td>10</td>
<td>155</td>
<td>180</td>
<td>2.2</td>
<td>3.6</td>
</tr>
</tbody>
</table>

Additional Information

Click these links for more information:

PRODUCT SELECTOR
TECHNICAL LIBRARY
INVENTORY
SAMPLES
CONTACT

General Specifications

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

Storage Temperature (Component)
-40 °C to +125 °C

Temperature Rise
40 °C at rated Irms

Rated Current
Inductance drops 30 % at Isat

Moisture Sensitivity Level
1

ESD Classification (HBM)
N/A

1Circuit 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: Carbonyl powder
Wire: Enamelled copper

Terminal Finish: Sn

Packaging: 1000 pcs. per 13-inch reel

Soldering Profile

Profile Feature
- Temperature Min. (Tmin)
- Temperature Max. (Tmax)
- Time (tL) from Tmin to Tmax
- Temperature (TL)
- Time (tL) maintained above TL
- Peak package body temperature (TP)
- Time within 5 °C of Actual Peak Temperature (tP)
- Ramp-down Rate (TP to TL)
- Time 25 °C to Peak Temperature

Pb Free Assembly
- Temperature (°C)
- Time (Seconds)

REFLOW TIMES: 3 TIMES MAX.

WARNING Cancer and Reproductive Harm
www.P65Warnings.ca.gov

** 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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SRP7028CC Series - Shielded Power Inductors

Product Dimensions

<table>
<thead>
<tr>
<th>Model</th>
<th>Top View</th>
<th>Side View</th>
<th>Bottom View</th>
</tr>
</thead>
<tbody>
<tr>
<td>8R2</td>
<td>7.3 x 0.3</td>
<td>2.8 x 0.2</td>
<td>1.8 x 0.3</td>
</tr>
<tr>
<td></td>
<td>(0.287 x 0.012)</td>
<td>(0.110 x 0.012)</td>
<td>(0.071 x 0.012)</td>
</tr>
</tbody>
</table>

Recommended Layout

<table>
<thead>
<tr>
<th>Model</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>R10Y</td>
<td>8.4 x 2.5 x 3.5</td>
</tr>
<tr>
<td></td>
<td>(0.331 x 0.098 x 0.138)</td>
</tr>
</tbody>
</table>

Electrical Schematic

How to Order

SRP7028CC - R10Y

Value Code (see table)

L vs. IDC and Temperature vs. IDC Curves

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