Features

- Shielded construction
- Metal alloy powder core
- High saturation current
- Low buzz noise
- Inductance range: 0.47 to 47 µH
- RoHS compliant* and halogen free**

SRP1770C Series - Shielded Power Inductors

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

Moisture Sensitivity Level

1

ESD Classification (HBM)

N/A

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.

Electrical Specifications @ 25 °C

<table>
<thead>
<tr>
<th>Bourns Part Number</th>
<th>Inductance @ 100 kHz (µH)</th>
<th>Q (Min.)</th>
<th>SRF (MHz)</th>
<th>DCR (mΩ)</th>
<th>DCR (mΩ) Max.</th>
<th>Isat (A)</th>
<th>Terminal Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>SRP1770C-R47M</td>
<td>0.47 ± 20</td>
<td>10</td>
<td>28</td>
<td>0.75</td>
<td>0.83</td>
<td>60.0</td>
<td>115</td>
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<tr>
<td>SRP1770C-1R0M</td>
<td>1.0 ± 20</td>
<td>20</td>
<td>24</td>
<td>1.30</td>
<td>1.50</td>
<td>48.0</td>
<td>68</td>
</tr>
<tr>
<td>SRP1770C-1R5M</td>
<td>1.5 ± 20</td>
<td>20</td>
<td>22</td>
<td>1.80</td>
<td>2.10</td>
<td>42.0</td>
<td>55</td>
</tr>
<tr>
<td>SRP1770C-2R2M</td>
<td>2.2 ± 20</td>
<td>20</td>
<td>21</td>
<td>2.50</td>
<td>2.80</td>
<td>40.0</td>
<td>45</td>
</tr>
<tr>
<td>SRP1770C-3R3M</td>
<td>3.3 ± 20</td>
<td>20</td>
<td>19</td>
<td>3.50</td>
<td>3.90</td>
<td>28.0</td>
<td>40</td>
</tr>
<tr>
<td>SRP1770C-4R7M</td>
<td>4.7 ± 20</td>
<td>20</td>
<td>17</td>
<td>4.80</td>
<td>5.50</td>
<td>26.0</td>
<td>37</td>
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<tr>
<td>SRP1770C-5R6M</td>
<td>5.6 ± 20</td>
<td>20</td>
<td>15</td>
<td>5.90</td>
<td>6.80</td>
<td>24.0</td>
<td>35</td>
</tr>
<tr>
<td>SRP1770C-6R8M</td>
<td>6.8 ± 20</td>
<td>20</td>
<td>14</td>
<td>8.40</td>
<td>9.20</td>
<td>22.0</td>
<td>30</td>
</tr>
<tr>
<td>SRP1770C-8R2M</td>
<td>8.2 ± 20</td>
<td>20</td>
<td>13</td>
<td>9.60</td>
<td>10.80</td>
<td>18.0</td>
<td>28</td>
</tr>
<tr>
<td>SRP1770C-100M</td>
<td>10.0 ± 20</td>
<td>20</td>
<td>12</td>
<td>11.60</td>
<td>13.00</td>
<td>17.0</td>
<td>25</td>
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<tr>
<td>SRP1770C-150M</td>
<td>15.0 ± 20</td>
<td>20</td>
<td>10</td>
<td>16.50</td>
<td>19.50</td>
<td>14.0</td>
<td>23</td>
</tr>
<tr>
<td>SRP1770C-220M</td>
<td>22.0 ± 20</td>
<td>20</td>
<td>8</td>
<td>24.00</td>
<td>27.60</td>
<td>12.0</td>
<td>19</td>
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<tr>
<td>SRP1770C-330M</td>
<td>33.0 ± 20</td>
<td>20</td>
<td>6</td>
<td>36.00</td>
<td>42.00</td>
<td>10.7</td>
<td>15</td>
</tr>
<tr>
<td>SRP1770C-470M</td>
<td>47.0 ± 20</td>
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<td>5</td>
<td>46.00</td>
<td>53.00</td>
<td>8.7</td>
<td>13</td>
</tr>
</tbody>
</table>

Soldering Profile

Preheating: (245 °C, 20~40 Sec.)

Soldering: (60~150 Sec.)

Natural Cooling: (260 °C / 10 Sec. Max.)

Recommended Layout

How to Order

Model: SRP1770C - 220M

Value Code (see table)

Product Dimensions

<table>
<thead>
<tr>
<th>DIMENSIONS: MM (INCHES)</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 1907H</td>
</tr>
</tbody>
</table>

Dimensions:

- 17.8 ± 0.50 (0.70 ± 0.020)
- 10.9 ± 0.30 (0.43 ± 0.012)
- 6.7 ± 0.30 (0.264 ± 0.012)
- 2.3 ± 0.30 (0.091 ± 0.012)
- 1.19 ± 0.30 (0.469 ± 0.012)
- 2.5 ± 0.30 (0.098 ± 0.012)

Schematic


*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
SRP1770C Series - Shielded Power Inductors

L vs. I Charts

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