SRP5030TA Series - Shielded Power Inductors

Features
- Shielded construction
- Carbonyl powder core
- High saturation current
- Inductance range: 0.1 to 10 µH
- AEC-Q200 qualified
- RoHS compliant* and halogen free**

Electrical Specifications @ 25 °C

<table>
<thead>
<tr>
<th>Bourns Part Number</th>
<th>Inductance @ 100 KHz / 1 V</th>
<th>Q (Min.) @ 100 KHz / 1 V</th>
<th>SRF (MHz) Typ.</th>
<th>DCR (mΩ) Typ.</th>
<th>DCR (mΩ) Max.</th>
<th>Irms (A)</th>
<th>Isat (A)</th>
<th>Terminal Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>SRP5030TA-R10Y</td>
<td>0.1 ± 30</td>
<td>5</td>
<td>320</td>
<td>2.5</td>
<td>3</td>
<td>23</td>
<td>27</td>
<td>Lead Frame</td>
</tr>
<tr>
<td>SRP5030TA-R22M</td>
<td>0.22 ± 20</td>
<td>5</td>
<td>155</td>
<td>3.7</td>
<td>4.4</td>
<td>15.5</td>
<td>21</td>
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</tr>
<tr>
<td>SRP5030TA-R33M</td>
<td>0.33 ± 20</td>
<td>5</td>
<td>110</td>
<td>4.3</td>
<td>5</td>
<td>14</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>SRP5030TA-R47M</td>
<td>0.47 ± 20</td>
<td>10</td>
<td>100</td>
<td>6.4</td>
<td>7.4</td>
<td>12</td>
<td>16</td>
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<tr>
<td>SRP5030TA-R68M</td>
<td>0.68 ± 20</td>
<td>10</td>
<td>85</td>
<td>8</td>
<td>12</td>
<td>8.5</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>SRP5030TA-1R0M</td>
<td>1.0 ± 20</td>
<td>10</td>
<td>62</td>
<td>13</td>
<td>14</td>
<td>7</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>SRP5030TA-1R2M</td>
<td>1.2 ± 20</td>
<td>10</td>
<td>50</td>
<td>14</td>
<td>16</td>
<td>6.5</td>
<td>11</td>
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<tr>
<td>SRP5030TA-1R5M</td>
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<td>44</td>
<td>16</td>
<td>25</td>
<td>6</td>
<td>10</td>
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<tr>
<td>SRP5030TA-2R2M</td>
<td>2.2 ± 20</td>
<td>15</td>
<td>36</td>
<td>25</td>
<td>35</td>
<td>5.5</td>
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<tr>
<td>SRP5030TA-3R3M</td>
<td>3.3 ± 20</td>
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<td>30</td>
<td>32</td>
<td>38</td>
<td>5</td>
<td>8</td>
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<tr>
<td>SRP5030TA-3R6M</td>
<td>3.6 ± 20</td>
<td>15</td>
<td>29</td>
<td>46</td>
<td>54</td>
<td>4.9</td>
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<tr>
<td>SRP5030TA-4R7M</td>
<td>4.7 ± 20</td>
<td>15</td>
<td>23</td>
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<td>53</td>
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<td>6</td>
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<tr>
<td>SRP5030TA-5R6M</td>
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<td>15</td>
<td>21</td>
<td>55</td>
<td>63</td>
<td>4.25</td>
<td>4.5</td>
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<tr>
<td>SRP5030TA-6R8M</td>
<td>6.8 ± 20</td>
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<td>19</td>
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<td>76.2</td>
<td>4</td>
<td>4.3</td>
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<tr>
<td>SRP5030TA-100M</td>
<td>10 ± 20</td>
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<td>18</td>
<td>110</td>
<td>128</td>
<td>2.75</td>
<td>3.5</td>
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</tbody>
</table>

Soldering Profile

Operating Temperature
............................................... -55 °C to +150 °C (Temperature rise included)
Storage Temperature
............................................... -55 °C to +150 °C
Rated Current
............................................... Inductance drops 20 % at Isat
Temperature Rise .....40 °C at rated Irms
Moisture Sensitivity Level.....................1
ESD Classification (HBM)............... N/A

Materials
Core......................Carbonyl powder
Wire ..................Enamelled copper
Terminal Finish ..........Sn
Packaging .................2000 pcs. per 13-inch reel

Product Dimensions

How to Order

Model
SRP5030TA - 100 M

Value Code (see table)
Tolerance Code

Recommended Layout

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. Specifications are subject to change without notice. Users should verify actual device performance in their specific applications. The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at www.bourns.com/docs/legal/disclaimer.pdf.
### L vs. I Charts

<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>SRP5030TA-R10Y</td>
<td>0.04 - 0.20</td>
<td>0 - 5.4</td>
<td>0 - 30</td>
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<tr>
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<td>5.4 - 10.8</td>
<td>0 - 20</td>
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<td></td>
<td>10.8 - 16.2</td>
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<td>16.2 - 21.6</td>
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<td>21.6 - 27.0</td>
<td>0 - 10</td>
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</table>

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>SRP5030TA-R22M</td>
<td>0.07 - 0.21</td>
<td>0 - 4.2</td>
<td>0 - 30</td>
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<tr>
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<td>4.2 - 8.4</td>
<td>0 - 20</td>
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<td>12.6 - 16.8</td>
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<td>16.8 - 21.0</td>
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</table>

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<tr>
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<th>DC Current (A)</th>
<th>Temperature Rise (°C)</th>
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</thead>
<tbody>
<tr>
<td>SRP5030TA-R33M</td>
<td>0.16 - 0.35</td>
<td>0 - 6.0</td>
<td>0 - 30</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6.0 - 10.5</td>
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<td>17.5 - 21.0</td>
<td>0 - 10</td>
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</table>

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<tr>
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<th>Inductance (μH)</th>
<th>DC Current (A)</th>
<th>Temperature Rise (°C)</th>
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<tbody>
<tr>
<td>SRP5030TA-R47M</td>
<td>0.30 - 0.60</td>
<td>0 - 8.25</td>
<td>0 - 30</td>
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<tr>
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<td>8.25 - 11.0</td>
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<td>17.0 - 20.0</td>
<td>0 - 10</td>
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</table>

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<thead>
<tr>
<th>Model</th>
<th>Inductance (μH)</th>
<th>DC Current (A)</th>
<th>Temperature Rise (°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SRP5030TA-R68M</td>
<td>0.60 - 1.2</td>
<td>0 - 1.5</td>
<td>0 - 30</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.5 - 3.0</td>
<td>0 - 20</td>
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<td>3.0 - 6.0</td>
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</tr>
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<td>6.0 - 9.0</td>
<td>0 - 10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>9.0 - 12.0</td>
<td>0 - 10</td>
</tr>
</tbody>
</table>

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SRP5030TA Series - Shielded Power Inductors

Packaging Specifications

Dimensions:

- **330** (13.000) DIA.
- **2.0 ± 0.5** (3.175 ± 0.200)
- **12.5 ± 0.5** (50.0 ± 0.000) DIA.
- **100 ± 2** (3.937 ± 0.079)
- **12.0 ± 0.5** (4.72 ± 0.000)
- **4.0** (1.57)
- **2.0** (0.79)
- **1.5 ± 0.1** (0.59 ± 0.004) DIA.
- **0.35 ± 0.05** (0.014 ± 0.002)
- **3.3 ± 0.1** (0.130 ± 0.004)
- **6.2 ± 0.1** (0.244 ± 0.004)
- **5.5 ± 0.1** (0.217 ± 0.004)
- **8.0 ± 0.1** (0.315 ± 0.004)
- **5.5 ± 0.1** (0.217 ± 0.004)
- **12.0 ± 0.3** (4.72 ± 0.012)

**QTY:** 2000 PCS. PER REEL

**USER DIRECTION OF FEED**

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