SRP1770TA Series - Shielded Power Inductors

**Features**

- Shielded construction
- Carbonyl powder core
- High saturation current
- Inductance range: 0.45 to 100 µH
- AEC-Q200 compliant
- 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) Max.</th>
<th>Irms (A)</th>
<th>Isat1 (A)</th>
<th>Isat2 (A)</th>
<th>Terminal Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>SRP1770TA-R45M</td>
<td>0.45 ± 20</td>
<td>20</td>
<td>56</td>
<td>0.8</td>
<td>96</td>
<td>62</td>
<td>85</td>
<td>125</td>
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<tr>
<td>SRP1770TA-1R0M</td>
<td>1 ± 20</td>
<td>20</td>
<td>35</td>
<td>1.6</td>
<td>2</td>
<td>52</td>
<td>60</td>
<td>70</td>
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<tr>
<td>SRP1770TA-1R5M</td>
<td>1.5 ± 20</td>
<td>20</td>
<td>30</td>
<td>2</td>
<td>2.5</td>
<td>47</td>
<td>52</td>
<td>65</td>
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<tr>
<td>SRP1770TA-2R2M</td>
<td>2.2 ± 20</td>
<td>20</td>
<td>22</td>
<td>2.4</td>
<td>2.7</td>
<td>43.5</td>
<td>47</td>
<td>67</td>
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<tr>
<td>SRP1770TA-3R3M</td>
<td>3.3 ± 20</td>
<td>20</td>
<td>17</td>
<td>3.5</td>
<td>3.9</td>
<td>28</td>
<td>45</td>
<td>54</td>
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<tr>
<td>SRP1770TA-4R7M</td>
<td>4.7 ± 20</td>
<td>20</td>
<td>15</td>
<td>4.8</td>
<td>5.5</td>
<td>25</td>
<td>41</td>
<td>50</td>
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<tr>
<td>SRP1770TA-5R6M</td>
<td>5.6 ± 20</td>
<td>20</td>
<td>12</td>
<td>5.8</td>
<td>7.05</td>
<td>21</td>
<td>40</td>
<td>45</td>
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<tr>
<td>SRP1770TA-6R8M</td>
<td>6.8 ± 20</td>
<td>20</td>
<td>11</td>
<td>8.4</td>
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<td>19</td>
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<tr>
<td>SRP1770TA-8R2M</td>
<td>8.2 ± 20</td>
<td>20</td>
<td>10</td>
<td>9.6</td>
<td>10.8</td>
<td>18</td>
<td>25</td>
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<td>SRP1770TA-100M</td>
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<td>20</td>
<td>8</td>
<td>11.8</td>
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<td>16.5</td>
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<td>SRP1770TA-150M</td>
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<td>7</td>
<td>17.8</td>
<td>20.5</td>
<td>12.5</td>
<td>23</td>
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<tr>
<td>SRP1770TA-220M</td>
<td>22 ± 20</td>
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<td>5</td>
<td>25.1</td>
<td>26.5</td>
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<td>18</td>
<td>23</td>
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<td>SRP1770TA-330M</td>
<td>33 ± 20</td>
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<td>38</td>
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<td>10.7</td>
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<td>20</td>
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<td>SRP1770TA-390M</td>
<td>39 ± 20</td>
<td>20</td>
<td>3</td>
<td>40</td>
<td>48</td>
<td>9.2</td>
<td>11</td>
<td>18</td>
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<td>47 ± 20</td>
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<td>2</td>
<td>48</td>
<td>55</td>
<td>8.7</td>
<td>9.5</td>
<td>16</td>
</tr>
<tr>
<td>SRP1770TA-560M</td>
<td>56 ± 20</td>
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<td>2</td>
<td>54</td>
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<td>7.8</td>
<td>9</td>
<td>15</td>
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<td>SRP1770TA-680M</td>
<td>68 ± 20</td>
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<td>7</td>
<td>8</td>
<td>13</td>
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<tr>
<td>SRP1770TA-101M</td>
<td>100 ± 20</td>
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<td>2</td>
<td>102</td>
<td>118</td>
<td>5.3</td>
<td>6.5</td>
<td>12</td>
</tr>
</tbody>
</table>

**Soldering Profile**

- Preheating: 100 °C to 250 °C
- Soldering: 150 °C to 217 °C
- Natural Cooling: 100 °C to 25 °C

**How to Order**

- Model: SRP1770TA - 220 M
- Value Code (see table)
- Tolerance Code

**Recommended Layout**

- Dimensions: MM (INCHES)

**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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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: Carbonyl powder
- Wire: Enameled copper
- Terminal Finish: Sn

**Product Dimensions**

- Lead Frame Terminal

- DIMENSIONS: MM (INCHES)
SRP1770TA Series - Shielded Power Inductors

L vs. I Charts

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L vs. I Charts (Continued)

Schematic

Packaging Specifications

REV. 11/19
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