**Features**
- Shielded construction
- Carbonyl powder core
- High saturation current
- Inductance range: 1 to 100 µH
- AEC-Q200 compliant
- RoHS compliant* and halogen free**

**SRP1770TA Series - Shielded Power Inductors**

**Electrical Specifications @ 25 °C**

<table>
<thead>
<tr>
<th>Bourns Part Number</th>
<th>Inductance @ 100 KHz / 1 V (µH)</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>Isat1 (A)</th>
<th>Isat2 (A)</th>
<th>Terminal Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>SRP1770TA-1R0M</td>
<td>1 ± 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>30</td>
<td>2</td>
<td>2.5</td>
<td>47</td>
<td>52</td>
<td>65</td>
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<td></td>
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<tr>
<td>SRP1770TA-2R2M</td>
<td>2.2 ± 20</td>
<td>22</td>
<td>2.4</td>
<td>2.7</td>
<td>42.5</td>
<td>47</td>
<td>62</td>
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<td></td>
</tr>
<tr>
<td>SRP1770TA-3R3M</td>
<td>3.3 ± 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>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>12</td>
<td>5.8</td>
<td>7.06</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>8.4</td>
<td>9.2</td>
<td>19</td>
<td>32</td>
<td>39</td>
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<tr>
<td>SRP1770TA-8R2M</td>
<td>8.2 ± 20</td>
<td>10</td>
<td>9.6</td>
<td>10.8</td>
<td>18</td>
<td>25</td>
<td>31</td>
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<tr>
<td>SRP1770TA-100M</td>
<td>10 ± 20</td>
<td>10</td>
<td>11.8</td>
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<td>16.5</td>
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<td>SRP1770TA-150M</td>
<td>15 ± 20</td>
<td>7</td>
<td>17.8</td>
<td>20.5</td>
<td>12.5</td>
<td>23</td>
<td>27</td>
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<tr>
<td>SRP1770TA-220M</td>
<td>22 ± 20</td>
<td>20</td>
<td>25.1</td>
<td>26.5</td>
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<td>23</td>
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<tr>
<td>SRP1770TA-330M</td>
<td>33 ± 20</td>
<td>20</td>
<td>4</td>
<td>40</td>
<td>48</td>
<td>9.2</td>
<td>11</td>
<td>18</td>
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<tr>
<td>SRP1770TA-390M</td>
<td>39 ± 20</td>
<td>20</td>
<td>3</td>
<td>48</td>
<td>55</td>
<td>8.7</td>
<td>9.5</td>
<td>16</td>
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<tr>
<td>SRP1770TA-470M</td>
<td>47 ± 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>SRP1770TA-560M</td>
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<td>20</td>
<td>3</td>
<td>54</td>
<td>62</td>
<td>7.8</td>
<td>9.9</td>
<td>15</td>
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<td>SRP1770TA-680M</td>
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<td>20</td>
<td>2</td>
<td>68</td>
<td>80</td>
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<td>8.4</td>
<td>13</td>
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<tr>
<td>SRP1770TA-101M</td>
<td>100 ± 20</td>
<td>20</td>
<td>2</td>
<td>102</td>
<td>118</td>
<td>5.3</td>
<td>6.5</td>
<td>12</td>
<td></td>
</tr>
</tbody>
</table>

**General Specifications**

- **Operating Temperature**
  - -40 °C to +150 °C (Temperature rise included)
- **Storage Temperature**
  - -40 °C to +125 °C
- **Rated Current**
  - Inductance drops 20 % at Isat1, 30 % at Isat2
- **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: 200 pcs. per 13-inch reel

**Soldering Profile**

- Preheating Soldering
- Natural Cooling

**Recommended Layout**

**Lead Frame Terminal**

**How to Order**

- Model
- Value Code (see table)
- Tolerance Code

**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.

Users should verify actual device performance in their specific applications.

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**SRP1770TA Series - Shielded Power Inductors**

**L vs. I Charts (Continued)**

![Graphs showing L vs. I relationship for SRP1770TA-680M and SRP1770TA-101M inductors.](image)

**Packaging Specifications**

![Diagram showing packaging dimensions for SRP1770TA inductors.](image)

**Schematic**

![Schematic of the inductor showing key components and connections.](image)

**REV. 02/19**

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

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