Features

- Semi-shielded construction
- Inductance range: 0.33 to 10 µH
- Rated current up to 2.1 A
- Low profile: 0.95 mm max.
- RoHS compliant* and halogen free**

Applications

- DC/DC converters
- Power supplies
- Wearable devices
- HDDs, SSDs
- Smartphones
- LCD displays

SRN2009T Series - Semi-shielded Power Inductors

Electrical Specifications @ 25 °C

<table>
<thead>
<tr>
<th>Bourns Part No.</th>
<th>Inductance @ 1 MHz / 0.1 V L (µH)</th>
<th>Q (Typ.)</th>
<th>SRF (MHz)</th>
<th>DCR (Ω)</th>
<th>Irms (A)</th>
<th>Isat (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SRN2009T-R33M</td>
<td>0.33 ±20</td>
<td>30</td>
<td>400</td>
<td>0.028</td>
<td>2</td>
<td>2.1</td>
</tr>
<tr>
<td>SRN2009T-R47M</td>
<td>0.47 ±20</td>
<td>25</td>
<td>300</td>
<td>0.038</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>SRN2009T-R68M</td>
<td>0.68 ±20</td>
<td>22</td>
<td>250</td>
<td>0.055</td>
<td>1.5</td>
<td>1.5</td>
</tr>
<tr>
<td>SRN2009T-1R0M</td>
<td>1.0 ±20</td>
<td>20</td>
<td>200</td>
<td>0.065</td>
<td>1.4</td>
<td>1.4</td>
</tr>
<tr>
<td>SRN2009T-1R5M</td>
<td>1.5 ±20</td>
<td>18</td>
<td>170</td>
<td>0.11</td>
<td>1.2</td>
<td>1.2</td>
</tr>
<tr>
<td>SRN2009T-2R2M</td>
<td>2.2 ±20</td>
<td>16</td>
<td>150</td>
<td>0.16</td>
<td>0.9</td>
<td>0.9</td>
</tr>
<tr>
<td>SRN2009T-3R3M</td>
<td>3.3 ±20</td>
<td>15</td>
<td>120</td>
<td>0.25</td>
<td>0.85</td>
<td>0.85</td>
</tr>
<tr>
<td>SRN2009T-4R7M</td>
<td>4.7 ±20</td>
<td>15</td>
<td>90</td>
<td>0.4</td>
<td>0.75</td>
<td>0.75</td>
</tr>
<tr>
<td>SRN2009T-6R8M</td>
<td>6.8 ±20</td>
<td>15</td>
<td>80</td>
<td>0.55</td>
<td>0.65</td>
<td>0.65</td>
</tr>
<tr>
<td>SRN2009T-100M</td>
<td>10 ±20</td>
<td>15</td>
<td>60</td>
<td>1</td>
<td>0.55</td>
<td>0.6</td>
</tr>
</tbody>
</table>

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

Materials

Core: Ferrite Wire: Enamelled copper
Terminal Finish: Enamelled copper
Coating: Magnetic epoxy resin
Packaging: 2000 pcs. per 7-inch reel

Product Dimensions

Recommended Layout
SRN2009 Series - Semi-shielded Power Inductors

Inductance vs. Current

Specifications are subject to change without notice.
Users should verify actual device performance in their specific applications.
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SRN2009T Series - Semi-shielded Power Inductors

**Soldering Profile**

<table>
<thead>
<tr>
<th>Preheating</th>
<th>Soldering</th>
<th>Natural Cooling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tp (260 °C, 10 Sec. Max.)</td>
<td>Tp (245 °C, 20–40 Sec.)</td>
<td></td>
</tr>
<tr>
<td>-200 °C</td>
<td>-217 °C</td>
<td>60–150 Sec.</td>
</tr>
<tr>
<td>60–180 Sec.</td>
<td>480 Sec. Max.</td>
<td></td>
</tr>
</tbody>
</table>

**Time (Seconds)**

**Packaging Specifications**

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>QTY: 2000 PCS. PER REEL</td>
<td></td>
</tr>
</tbody>
</table>

**User Direction of Feed**

**Soldering Profile**

- **Preheating Tp (260 °C, 10 Sec. Max.)**
- **Soldering Tp (245 °C, 20–40 Sec.)**
- **Natural Cooling**

**Time (Seconds)**

- **Temperature (°C)**
  - 25
  - 4.0 ± 0.1 (0.157 ± 0.004)
  - 4.0 ± 0.1 (0.157 ± 0.004)
  - 8.0 ± 0.1 (0.315 ± 0.004)
  - 8.0 ± 1.0 (0.331 ± 0.004)
  - 2.0 ± 0.1 (0.079 ± 0.004)
  - 2.0 ± 0.1 (0.079 ± 0.004)
  - 2.5 ± 0.1 (0.089 ± 0.004)

**QTY: 2000 PCS. PER REEL**

**User Direction of Feed**

**Soldering Profile**

- **Preheating Tp (260 °C, 10 Sec. Max.)**
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  - 2.0 ± 0.1 (0.079 ± 0.004)
  - 2.5 ± 0.1 (0.089 ± 0.004)

**QTY: 2000 PCS. PER REEL**

**User Direction of Feed**
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