SRN2010BTA Series - Semi-shielded Power Inductors

Features
- Semi-shielded construction
- 1 mm max. profile
- Enhanced product reliability with soldered lead-wire
- AEC-Q200 compliant
- RoHS compliant* and halogen free**

Electrical Specifications @ 25 °C

<table>
<thead>
<tr>
<th>Bourns Part No.</th>
<th>Inductance @ 100 kHz / 1 V</th>
<th>Q @ 1 MHz</th>
<th>SRF (MHz)</th>
<th>DCR (mΩ)</th>
<th>I_{ms} (A)</th>
<th>I_{sat} (A)</th>
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<tbody>
<tr>
<td>SRN2010BTA-R24M</td>
<td>0.24</td>
<td>20</td>
<td>10</td>
<td>270</td>
<td>20</td>
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<td>140</td>
<td>168</td>
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</tbody>
</table>

Additional Information
Click these links for more information:
- PRODUCT SELECTOR
- TECHNICAL LIBRARY
- INVENTORY
- SAMPLES
- CONTACT

General Specifications

Operating Temperature
-55 °C to +125 °C (Temperature rise included)

Storage Temperature
- Component on board: -55 °C to +125 °C
- In tape and reel package: -10 °C to +40 °C, 50-60 % RH

Temperature Rise
- 40 °C at rated I_{rms}

Rated Current
- Inductance drops 30 % at I_{sat}

Moisture Sensitivity Level
- 1 ESD Classification (HBM)

Materials
- Core: Ferrite
- Wire: Enamelled copper
- Terminal Finish: Ag/Ni/Sn
- Coating: Magnetic resin
- Packaging: 3000 pcs. per 7-inch reel

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.
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Soldering Profile

Profile Feature | Pb Free Assembly
---|---
Preheat - Temperature Min. ($T_{smin}$) | 150 °C
- Temperature Max. ($T_{smax}$) | 200 °C
- Time ($t_s$) from $T_{smin}$ to $T_{smax}$ | 60-120 seconds
Ramp-up Rate ($T_L$ to $T_p$) | 3 °C/second max.
Liquidous temperature ($T_L$) | 217 °C
Time ($t_L$) maintained above $T_L$ | 60-150 seconds
Peak package body temperature ($T_p$) | 260 °C
Time within 5 °C of Actual Peak Temperature ($t_p$) | < 30 seconds
Ramp-Down Rate ($T_p$ to $T_L$) | 6 °C/second max.
Time 25 °C to Peak Temperature | 8 minutes max.

REFLOW TIMES: 3 TIMES MAX.

L vs. I Charts

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L vs. I Charts (continued)

Packaging Specifications

| QTY: 3,000 PCS. PER REEL |

Dimensions: MM

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.4 x 1.5</td>
<td>2.362 ± 0.039</td>
</tr>
<tr>
<td>13 x 0.5</td>
<td>0.302 ± 0.008</td>
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<tr>
<td>60 x 1.0</td>
<td>0.300 ± 0.009</td>
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<tr>
<td>178 x 2.0</td>
<td>0.708</td>
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