SRN4018BTA Series - Semi-shielded Power Inductors

**Features**
- Semi-shielded construction
- Bottom soldered lead-wire for enhanced product reliability
- AEC-Q200 compliant
- RoHS compliant* and halogen free**

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

**Electrical Specifications @ 25 °C**

<table>
<thead>
<tr>
<th>Bourns Part No.</th>
<th>Inductance @ 100 kHz / 1 V</th>
<th>Q @ 1 MHz Min.</th>
<th>SRF (MHz) Typ.</th>
<th>DCR (mΩ) ±20 %</th>
<th>I_{rms} (A) Typ.</th>
<th>I_{sat} (A) Typ.</th>
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<tr>
<td>SRN4018BTA-R47M</td>
<td>0.47</td>
<td>20</td>
<td>10</td>
<td>151</td>
<td>15</td>
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<td>10</td>
<td>100</td>
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</table>

**General Specifications**
- Operating Temperature: -55 °C to +125 °C (Temperature rise included)
- Storage Temperature (Component on board): -55 °C to +125 °C
- Temperature Rise: 40 °C at rated I_{rms}
- Rated Current: Inductance drops 30 % at I_{sat}
- Moisture Sensitivity Level: 1
- ESD Classification (HBM): N/A

**Materials**
- Core: Ferrite
- Wire: Enamelled copper
- Terminal Finish: Ag/Ni/Sn
- Coating: Magnetic resin
- Packaging: 3500 pcs. per 13-inch reel

**Recommended Layout**

**How to Order**

Model: SRN4018BTA - R47M
Value Code (see table)
SRN4018BTA Series – Semi-shielded Power Inductors

Soldering Profile

Profile Feature                  Pb Free Assembly
Preheat                       
  - Temperature Min. \( (T_{s_{\text{min}}} \) 150 °C
  - Temperature Max. \( (T_{s_{\text{max}}} \) 200 °C
  - Time \( (t_s) \) from \( T_{s_{\text{min}}} \) to \( T_{s_{\text{max}}} \) 60-120 seconds
Ramp-up Rate \( (T_L \text{ to } T_p) \) 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 \( (T_p \text{ to } T_L) \) 6 °C/second max.
Time 25 °C to Peak Temperature 8 minutes max.

REFLOW TIMES: 3 TIMES MAX.

L vs. I Charts

Specifications are subject to change without notice.
Users should verify actual device performance in their specific applications.
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SRN4018BTA Series – Semi-shielded Power Inductors

L vs. I Charts (continued)

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Packaging Specifications

USER DIRECTION OF FEED
QTY: 3,500 PCS. PER REEL

DIMENSIONS: MM (INCHES)

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