Features
- Semi-shielded construction
- Inductance range: 0.47 to 10 µH
- Rated current up to 1.45 A
- AEC-Q200 qualified
- Low profile: 0.8 mm max.
- RoHS compliant* and halogen free**

SRN2508A 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) Tol. %</th>
<th>Q @ 1 MHz Typ.</th>
<th>SRF (MHz) Typ.</th>
<th>DCR (Ω) ±20 %</th>
<th>Irms (A) Typ.</th>
<th>Isat (A) Typ.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SRN2508A-R47M</td>
<td>0.47 ±20</td>
<td>10</td>
<td>340</td>
<td>0.080</td>
<td>1.45</td>
<td>2.50</td>
</tr>
<tr>
<td>SRN2508A-R68M</td>
<td>0.68 ±20</td>
<td>10</td>
<td>270</td>
<td>0.100</td>
<td>1.35</td>
<td>2.05</td>
</tr>
<tr>
<td>SRN2508A-1R0M</td>
<td>1.0 ±20</td>
<td>10</td>
<td>220</td>
<td>0.120</td>
<td>1.20</td>
<td>1.75</td>
</tr>
<tr>
<td>SRN2508A-1R5M</td>
<td>1.5 ±20</td>
<td>10</td>
<td>180</td>
<td>0.170</td>
<td>1.05</td>
<td>1.65</td>
</tr>
<tr>
<td>SRN2508A-2R2M</td>
<td>2.2 ±20</td>
<td>10</td>
<td>140</td>
<td>0.210</td>
<td>0.95</td>
<td>1.40</td>
</tr>
<tr>
<td>SRN2508A-3R3M</td>
<td>3.3 ±20</td>
<td>10</td>
<td>110</td>
<td>0.300</td>
<td>0.85</td>
<td>1.10</td>
</tr>
<tr>
<td>SRN2508A-4R7M</td>
<td>4.7 ±20</td>
<td>10</td>
<td>90</td>
<td>0.400</td>
<td>0.70</td>
<td>0.90</td>
</tr>
<tr>
<td>SRN2508A-6R8M</td>
<td>6.8 ±20</td>
<td>10</td>
<td>80</td>
<td>0.670</td>
<td>0.55</td>
<td>0.75</td>
</tr>
<tr>
<td>SRN2508A-100M</td>
<td>10 ±20</td>
<td>10</td>
<td>50</td>
<td>0.930</td>
<td>0.45</td>
<td>0.55</td>
</tr>
</tbody>
</table>

### General Specifications

- **Operating Temperature**: -55 °C to +125 °C (Temperature rise included)
- **Storage Temperature (Component)**: -55 °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: Magnetic epoxy resin
- Coating: Sn
- Packaging: 2000 pcs. per 7-inch reel

### Recommended Layout

**Dimensions**: MM

- 2.7 (0.106) REF.
- 2.2 (0.087) REF.
- 0.8 (0.031) REF.

**Dimensions**: INCHES

- 0.85 (0.033) REF.
- 0.8 (0.031) REF.

**Dimensions**: MAX.

- 0.8 (0.031) MAX.

### How to Order

**Model**: SRN2508A - R47M

**Value Code** (see table)

<table>
<thead>
<tr>
<th>Model</th>
<th>Value Code</th>
<th>DIMENSIONS: MM (INCHES)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>2.5 ±0.3/0.1 (0.098 + 0.012/-0.004)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.0 ±0.35/0.05 (0.079 + 0.014/-0.002)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.85 (0.033) REF.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.8 (0.031) REF.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.8 (0.031) MAX.</td>
</tr>
</tbody>
</table>

### Electrical Schematic

[Diagram of the inductor layout]

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**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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SRN2508A Series - Semi-shielded Power Inductors

Soldering Profile

Preheating
Soldering
Natural Cooling

Temperature (°C)

25

Time (Seconds)

480 Sec. Max.
60-180 Sec.
60-150 Sec.
-217 °C
-150 °C
-260 °C
T_p (260 °C, 10 Sec. Max.)
t_p (245 °C, 20-40 Sec.)

Packaging Specifications

DIMENSIONS: MM (INCHES)

8.4 ± 1.0
(.331 ± .04)

178 ± 2.0
(7.008 ± .079)

50.0
(1.969)
MIN.

13.0 ± 0.8
(.512 ± .031)

4.0 ± 0.1
(.157 ± .004)

4.0 ± 0.05
(.157 ± .002)

2.27 ± 0.05
(.089 ± .002)

2.74 ± 0.05
(.108 ± .002)

2.0 ± 0.05
(.079 ± .002)

0.23 ± 0.05
(.009 ± .002)

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