**SRF1280A Series - Dual-Winding Shielded Power Inductors**

### Features
- Multiple applications: parallel, series, dual-inductor and transformer
- Magnetically shielded, low radiation
- Inductance range: 0.47 to 1000 μH
- Rated current up to 17.9 A
- AEC-Q200 compliant
- RoHS compliant* and halogen free**

### Applications
- DC/DC converters
- Power supplies
- SEPIC - DC/DC converters

### Electrical Schematic

#### Electrical Specifications @ 25 °C

<table>
<thead>
<tr>
<th>Bourns Part No.</th>
<th>Parallel Rating</th>
<th>Series Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Inductance @ 100 KHz L (μH)</td>
<td>Tol. (%)</td>
</tr>
<tr>
<td>SRF1280A-R47Y</td>
<td>0.47 ± 30</td>
<td>0.0055</td>
</tr>
<tr>
<td>SRF1280A-1R0Y</td>
<td>1.0 ± 30</td>
<td>0.0067</td>
</tr>
<tr>
<td>SRF1280A-1R5Y</td>
<td>1.5 ± 30</td>
<td>0.0076</td>
</tr>
<tr>
<td>SRF1280A-2R2Y</td>
<td>2.2 ± 30</td>
<td>0.0092</td>
</tr>
<tr>
<td>SRF1280A-3R3Y</td>
<td>3.3 ± 30</td>
<td>0.011</td>
</tr>
<tr>
<td>SRF1280A-4R7Y</td>
<td>4.7 ± 30</td>
<td>0.0135</td>
</tr>
</tbody>
</table>

### General Specifications

- Test Voltage: 0.25 V
- Operating Temperature: -40 °C to +125 °C (Temperature rise included)
- Storage Temperature: -40 °C to +125 °C
- Temperature Rise: 40 °C typ. at rated Irms
- Inductance drop: 30% at Isat
- Hi-pot (N1-N2): 500 Vac/60 Hz, 3 mA, 1 sec
- Moisture Sensitivity Level: ESD Classification (HBM): 1

### Materials

- Core: Ferrite
- Wire: Enameled copper
- Terminal Finish: Sn

### Recommended Layout

- **Parallel Mode**: 2.15 (0.085)/5.00 ± 0.3 (1.97 ± 0.012) / 1.80 ± 0.2 (0.071 ± 0.008)
- **Series Mode**: 2.15 (0.085)/4.50 ± 0.3 (1.77 ± 0.012) / 1.28 (0.050)

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**Inductance vs. IDC**

<table>
<thead>
<tr>
<th>Model</th>
<th>L @ 25 °C</th>
<th>L @ 125 °C</th>
</tr>
</thead>
<tbody>
<tr>
<td>SRF1280A-470M</td>
<td>50.0 µH</td>
<td>3.3 µH</td>
</tr>
<tr>
<td>SRF1280A-681M</td>
<td>800.0 µH</td>
<td>3.3 µH</td>
</tr>
<tr>
<td>SRF1280A-102M</td>
<td>1200.0 µH</td>
<td>3.3 µH</td>
</tr>
</tbody>
</table>

**Temperature Rise vs. IDC**

<table>
<thead>
<tr>
<th>Model</th>
<th>ΔT @ 25 °C</th>
</tr>
</thead>
<tbody>
<tr>
<td>SRF1280A-470M</td>
<td>100.0 °C</td>
</tr>
<tr>
<td>SRF1280A-681M</td>
<td>100.0 °C</td>
</tr>
<tr>
<td>SRF1280A-102M</td>
<td>100.0 °C</td>
</tr>
</tbody>
</table>

**Soldering Profile**

- **Temperature Rising Area**: 0 °C - 40 °C, 40 °C sec. max.
- **Preheat Area**: 40 °C - 200 °C, 60 - 130 sec.
- **Reflow Area**: 200 °C, 135 sec. max.
- **Forced Cooling Area**: 217 °C, 60 - 150 sec. max.

**How to Order**

<table>
<thead>
<tr>
<th>Model</th>
<th>Value Code (see table)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SRF1280A-100M</td>
<td></td>
</tr>
</tbody>
</table>

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