SRP1580CA Series - Shielded Power Inductors

**Features**
- Shielded construction
- Metal alloy powder core
- High saturation current
- Low buzz noise
- Flat wire
- AEC-Q200 compliant
- RoHS compliant* and halogen free**

### Electrical Specifications @ 25 °C

<table>
<thead>
<tr>
<th>Bourns Part Number</th>
<th>Inductance @ 100 KHz / 0.1 V</th>
<th>Q Typ. @ 100 kHz / 0.1 V</th>
<th>SRF (MHz) Typ.</th>
<th>DCR (mΩ) Typ.</th>
<th>DCR (mΩ) Max.</th>
<th>Irms (A) Typ.</th>
<th>Isat (A) Typ.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SRP1580CA-1R0M</td>
<td>1.0</td>
<td>20</td>
<td>30</td>
<td>28</td>
<td>1.0</td>
<td>1.15</td>
<td>41</td>
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<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>20 °C Temp. Rise</td>
<td>40 °C Temp. Rise</td>
<td></td>
</tr>
<tr>
<td>SRP1580CA-2R0M</td>
<td>2.0</td>
<td>20</td>
<td>30</td>
<td>18</td>
<td>1.92</td>
<td>2.21</td>
<td>29.5</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td>20 °C Temp. Rise</td>
<td>40 °C Temp. Rise</td>
<td></td>
</tr>
<tr>
<td>SRP1580CA-5R3M</td>
<td>5.3</td>
<td>20</td>
<td>30</td>
<td>12</td>
<td>4.45</td>
<td>5.34</td>
<td>19.5</td>
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<tr>
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<td></td>
<td></td>
<td></td>
<td>20 °C Temp. Rise</td>
<td>40 °C Temp. Rise</td>
<td></td>
</tr>
</tbody>
</table>

### General Specifications

- **Operating Temperature**: -55 °C to +155 °C (Temperature rise included)
- **Storage Temperature (Component)**: -55 °C to +155 °C
- **Rated Current**: Inductance drops 30 % at Isat
- **Temperature Rise**: 20 or 40 °C at rated Irms
- **Rated Voltage**: 40 V Typ.
- **Moisture Sensitivity Level**: 1
- **ESD Classification (HBM)**: N/A

1 Circuit design, component, PCB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.

### Materials
- **Core**: Metal alloy powder
- **Wire**: Enameled copper
- **Terminal Finish**: Sn
- **Packaging**: 200 pcs. per 13-inch reel

Please consult [Bourns® Model SRP-A Series Visual Inspection Guide](#) for detailed construction, processing and testing information.

### Recommended Layout

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** 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.
Specifications are subject to change without notice.
Users should verify actual device performance in their specific applications.
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L vs. I Charts

### SRP1580CA-1R0M
- Inductance (μH) vs. DC Current (A)
- Temperature Rise (°C) vs. DC Current (A)

### SRP1580CA-2R0M
- Inductance (μH) vs. DC Current (A)
- Temperature Rise (°C) vs. DC Current (A)

### SRP1580CA-5R3M
- Inductance (μH) vs. DC Current (A)
- Temperature Rise (°C) vs. DC Current (A)

Packaging Specifications

- COVER TAPE: 2.0 ± 0.5 (0.079 ± 0.020)
- EMBOSSED CARRIER: 100 ± 2 (3.937 ± 0.079)
- DIMENSIONS: (MM) 330 (12.992)
- DIMENSIONS: (INCHES) 14.2 ± 0.1 (0.559 ± 0.004)

Users should verify actual device performance in their specific applications.

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