## SRP1245C Series - Shielded Power Inductors

### Electrical Specifications @ 25 °C

<table>
<thead>
<tr>
<th>Bourns Part Number</th>
<th>Inductance @ 100 kHz / 1 V</th>
<th>Q (Min.) @ 100 kHz</th>
<th>SRF (MHz)</th>
<th>DCR (mΩ)</th>
<th>Isat (A)</th>
<th>Terminal Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>L (µH)</td>
<td>Tol. (%)</td>
<td>Typ.</td>
<td>Max.</td>
<td>Typ.</td>
<td></td>
</tr>
<tr>
<td>SRP1245C-R47M</td>
<td>0.47 ± 0.07</td>
<td>20 ± 0.5</td>
<td>70 ± 0.5</td>
<td>0.90 ± 0.1</td>
<td>3.5 ± 0.4</td>
<td>non-leadframe</td>
</tr>
<tr>
<td>SRP1245C-R68M</td>
<td>0.68 ± 0.12</td>
<td>20 ± 0.5</td>
<td>58 ± 0.4</td>
<td>1.4 ± 0.2</td>
<td>3.7 ± 0.4</td>
<td>leadframe</td>
</tr>
<tr>
<td>SRP1245C-R82M</td>
<td>1.0 ± 0.12</td>
<td>20 ± 0.5</td>
<td>42 ± 0.2</td>
<td>2.4 ± 0.3</td>
<td>3.8 ± 0.4</td>
<td></td>
</tr>
<tr>
<td>SRP1245C-R100M</td>
<td>1.5 ± 0.12</td>
<td>20 ± 0.5</td>
<td>32 ± 0.3</td>
<td>3.5 ± 0.4</td>
<td>4.0 ± 0.4</td>
<td></td>
</tr>
<tr>
<td>SRP1245C-R150M</td>
<td>2.2 ± 0.18</td>
<td>20 ± 0.5</td>
<td>27 ± 0.3</td>
<td>3.9 ± 0.4</td>
<td>5.3 ± 0.4</td>
<td></td>
</tr>
<tr>
<td>SRP1245C-R220M</td>
<td>3.3 ± 0.22</td>
<td>20 ± 0.5</td>
<td>25 ± 0.3</td>
<td>4.3 ± 0.4</td>
<td>7.0 ± 0.4</td>
<td></td>
</tr>
<tr>
<td>SRP1245C-R47M</td>
<td>4.7 ± 0.3</td>
<td>20 ± 0.5</td>
<td>11 ± 0.2</td>
<td>1.5 ± 0.3</td>
<td>11 ± 0.3</td>
<td></td>
</tr>
<tr>
<td>SRP1245C-R68M</td>
<td>6.8 ± 0.5</td>
<td>20 ± 0.5</td>
<td>16 ± 0.2</td>
<td>2.3 ± 0.3</td>
<td>12 ± 0.3</td>
<td></td>
</tr>
<tr>
<td>SRP1245C-R82M</td>
<td>8.2 ± 0.5</td>
<td>20 ± 0.5</td>
<td>13 ± 0.2</td>
<td>3.2 ± 0.3</td>
<td>15 ± 0.3</td>
<td></td>
</tr>
<tr>
<td>SRP1245C-R100M</td>
<td>10 ± 0.5</td>
<td>20 ± 0.5</td>
<td>10 ± 0.2</td>
<td>4.1 ± 0.3</td>
<td>17 ± 0.3</td>
<td></td>
</tr>
<tr>
<td>SRP1245C-R150M</td>
<td>15 ± 0.7</td>
<td>20 ± 0.5</td>
<td>8 ± 0.2</td>
<td>6.3 ± 0.4</td>
<td>21 ± 0.3</td>
<td></td>
</tr>
<tr>
<td>SRP1245C-R220M</td>
<td>22 ± 1.0</td>
<td>20 ± 0.5</td>
<td>6 ± 0.2</td>
<td>8.5 ± 0.4</td>
<td>25 ± 0.3</td>
<td></td>
</tr>
</tbody>
</table>

### Product Dimensions

#### Non-Lead Frame Terminal

**Dimensions:**

- **R47**
  - YYWWH
  - 13.5 ± 0.5 (531 ± 0.020)
  - 12.8 ± 0.3 (496 ± 0.012)
  - 4.7 ± 0.3 (185 ± 0.012)

#### Lead Frame Terminal

**Dimensions:**

- **100**
  - YYWWH
  - 13.5 ± 0.5 (531 ± 0.020)
  - 12.8 ± 0.3 (496 ± 0.012)
  - 4.7 ± 0.3 (185 ± 0.012)

**Recommended Layout**

[Diagram showing Recommended Layout]

### Features

- Shielded construction
- Metal alloy powder core
- High saturation current
- Low buzz noise
- Inductance range: 0.15 to 22 µH
- RoHS compliant* and halogen free**

### General Specifications

- **Operating Temperature**
  - -40 °C to +125 °C (Temperature rise included)
- **Storage Temperature**
  - -40 °C to +125 °C
- **Rated Current**
  - Inductance drops 30% at Isat
- **Temperature Rise**
  - ... °C at rated Irms
- **Moisture Sensitivity Level**
  - 1 ESD Classification (HBM)

### Materials

- Core: Metal alloy powder
- Wire: Enamelled copper
- Packaging: 500 pcs. per 13-inch reel

### How to Order

**Model**

- **SRP1245C**

**Value Code (see table)**

**Recommended Layout**

[Diagram showing 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.

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### SRP1245C Series - Shielded Power Inductors

#### L vs. I Charts

<table>
<thead>
<tr>
<th>Inductance (μH)</th>
<th>DC Current (A)</th>
<th>Temperature Rise (°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SRP1245C-R15Y</td>
<td>0 23 46 69 92 115</td>
<td>0 20 40 60 80 100</td>
</tr>
<tr>
<td>SRP1245C-R22M</td>
<td>0 20 40 60 80 100</td>
<td>0 20 40 60 80 100</td>
</tr>
<tr>
<td>SRP1245C-R36M</td>
<td>0 18 36 54 72 90</td>
<td>0 20 40 60 80 100</td>
</tr>
<tr>
<td>SRP1245C-R47M</td>
<td>0 14 28 42 56 70</td>
<td>0 20 40 60 80 100</td>
</tr>
<tr>
<td>SRP1245C-1R5M</td>
<td>0 10 20 30 40 50</td>
<td>0 20 40 60 80 100</td>
</tr>
<tr>
<td>SRP1245C-4R7M</td>
<td>0 6 12 18 24 30</td>
<td>0 20 40 60 80 100</td>
</tr>
<tr>
<td>SRP1245C-100M</td>
<td>0 4 8 12 16 20</td>
<td>0 20 40 60 80 100</td>
</tr>
<tr>
<td>SRP1245C-R68M</td>
<td>0 12 24 36 48 60</td>
<td>0 20 40 60 80 100</td>
</tr>
<tr>
<td>SRP1245C-2R2M</td>
<td>0 9 18 27 36 45</td>
<td>0 20 40 60 80 100</td>
</tr>
<tr>
<td>SRP1245C-6R8M</td>
<td>0 5 10 15 20 25</td>
<td>0 20 40 60 80 100</td>
</tr>
<tr>
<td>SRP1245C-1R0M</td>
<td>0 3 6 9 12 15</td>
<td>0 20 40 60 80 100</td>
</tr>
<tr>
<td>SRP1245C-3R3M</td>
<td>0 3 6 9 12 15</td>
<td>0 20 40 60 80 100</td>
</tr>
<tr>
<td>SRP1245C-8R2M</td>
<td>0 3 6 9 12 15</td>
<td>0 20 40 60 80 100</td>
</tr>
<tr>
<td>SRP1245C-150M</td>
<td>0 3 6 9 12 15</td>
<td>0 20 40 60 80 100</td>
</tr>
<tr>
<td>SRP1245C-220M</td>
<td>0 3 6 9 12 15</td>
<td>0 20 40 60 80 100</td>
</tr>
<tr>
<td>SRP1245C-1R0M</td>
<td>0 3 6 9 12 15</td>
<td>0 20 40 60 80 100</td>
</tr>
</tbody>
</table>

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**L vs. I Charts**

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**Soldering Profile**

- **PRE-HEATING**
  - $t_p$ (245 °C / 20~40 seconds)

- **SOLDERING**
  - $T_p$ (260 °C / 10 seconds max.)

- **NATURAL COOLING**
  - 60 ~ 150 seconds
  - 60 ~ 180 seconds
  - 480 seconds max.

**Electrical Schematic**

**Typical Part Marking**

**INDUCTANCE CODE**

**MATERIAL CODE**

**DATE CODE:**
- YY = LAST TWO DIGITS OF YEAR
- WW = WEEK NUMBER

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Packaging Specifications

DIMENSIONS: MM (INCHES)

QTY: 500 PCS PER REEL

BOURNS®

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