Features
- Shielded construction for low radiation
- Metal alloy powder core for high saturation current
- Developed for use with Texas Instruments' Model BQ25638/BQ25638D
- RoHS compliant* and halogen free**

Applications
- Wearable devices
- Laptops
- Smartphones

SRP3212 Series - Shielded Power Inductors

Electrical Specifications @ 25 °C

<table>
<thead>
<tr>
<th>Bourns Part No.</th>
<th>Inductance L (μH)</th>
<th>Tol. %</th>
<th>Q Typ. @ 100 kHz</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>SRP3212-R33M</td>
<td>0.33</td>
<td>20</td>
<td>3</td>
<td>132</td>
<td>10</td>
<td>13</td>
<td>8.5</td>
<td>9.1</td>
</tr>
<tr>
<td>SRP3212-R47M</td>
<td>0.47</td>
<td>20</td>
<td>3</td>
<td>100</td>
<td>16</td>
<td>19.2</td>
<td>7.0</td>
<td>8.2</td>
</tr>
<tr>
<td>SRP3212-R68M</td>
<td>0.68</td>
<td>20</td>
<td>5</td>
<td>83</td>
<td>20</td>
<td>24</td>
<td>6.2</td>
<td>7.3</td>
</tr>
<tr>
<td>SRP3212-1R0M</td>
<td>1.0</td>
<td>20</td>
<td>5</td>
<td>63</td>
<td>26</td>
<td>32</td>
<td>5.5</td>
<td>6.5</td>
</tr>
<tr>
<td>SRP3212-1R5M</td>
<td>1.5</td>
<td>20</td>
<td>5</td>
<td>43</td>
<td>44</td>
<td>53</td>
<td>4.4</td>
<td>5.0</td>
</tr>
<tr>
<td>SRP3212-2R2M</td>
<td>2.2</td>
<td>20</td>
<td>5</td>
<td>41</td>
<td>61</td>
<td>73</td>
<td>4.0</td>
<td>4.8</td>
</tr>
<tr>
<td>SRP3212-3R3M</td>
<td>3.3</td>
<td>20</td>
<td>5</td>
<td>28</td>
<td>87</td>
<td>101</td>
<td>3.1</td>
<td>3.4</td>
</tr>
<tr>
<td>SRP3212-4R7M</td>
<td>4.7</td>
<td>20</td>
<td>5</td>
<td>25</td>
<td>122</td>
<td>146</td>
<td>2.2</td>
<td>2.8</td>
</tr>
</tbody>
</table>

**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.

Electrical Schematic

How to Order
SRP3212 - R33M

Model ________
Value Code (see table) ________

WARNING Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Click these links for more information:
PRODUCT SELECTOR  TECHNICAL LIBRARY  INVENTORY  SAMPLES  CONTACT

General Specifications
Operating Temperature ~40 °C to +125 °C (Temperature rise included)
Storage Temperature (Component) ~40 °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
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: Ag/Ni/Sn
Packaging: 2000 pcs. per 7-inch reel

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NEW!
SRP3212 Series - Shielded Power Inductors

Product Dimensions

- **BOTTOM VIEW**: 1.0 ± 0.2 (0.04 x 0.008) (INCHES) / 1.1 ± 0.3 (0.043 ± 0.012) (MM)
- **SIDE VIEW**: 3.2 ± 0.3 (1.26 ± 0.012) (INCHES) / 2.5 ± 0.3 (0.98 ± 0.012) (MM)

Recommended Layout

- **DIMENSIONS**: 3.7 (1.46) (INCHES) / 2.8 (1.11) (INCHES) / 0.7 - 1.7 (0.029 – 0.067) (INCHES)

Soldering Profile

- **Temperature (°C)**
  - 25 °C to Peak Temperature: 8 minutes max.
  - Time 25 °C to Peak Temperature: 8 minutes max.
  - Preheat Area: 60 - 120 seconds

<table>
<thead>
<tr>
<th>Profile Feature</th>
<th>Pb Free Assembly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preheat</td>
<td></td>
</tr>
<tr>
<td>- Temperature Min. (T_smin)</td>
<td>150 °C</td>
</tr>
<tr>
<td>- Temperature Max. (T_smax)</td>
<td>200 °C</td>
</tr>
<tr>
<td>- Time (ts) from T_smin to T_smax</td>
<td>60 - 120 seconds</td>
</tr>
<tr>
<td>Ramp-up Rate (T_L to T_p)</td>
<td>3 °C/second max.</td>
</tr>
<tr>
<td>Liquidus temperature (T_L)</td>
<td>217 °C</td>
</tr>
<tr>
<td>Time (t_L) maintained above T_L</td>
<td>60 - 150 seconds</td>
</tr>
<tr>
<td>Peak package body temperature (T_p)</td>
<td>260 °C</td>
</tr>
<tr>
<td>Time within 5 °C of Actual Peak Temperature (t_p)</td>
<td>&lt; 30 seconds</td>
</tr>
<tr>
<td>Ramp-Down Rate (T_p to T_L)</td>
<td>6 °C/second max.</td>
</tr>
</tbody>
</table>

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L vs. I Charts

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SRP3212 Series - Shielded Power Inductors

Packaging Specifications

Dimensions (MM)
- DIA. 8.4 ± 0.1 (.331 ± .004)
- H 2.0 (.079)
- MIN. 178

Dimensions (INCHES)
- DIA. 8.4 +0.15/-0 (.331 +.059/-0)
- H 2.0 (.079)
- MIN. 178

QTY: 2000 PCS. PER REEL

USER DIRECTION OF FEED

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EMEA: Tel: +36 88 885 877 • Email: eurocus@bourns.com
The Americas: Tel: +1-951 781-5500 • Email: americus@bourns.com
www.bourns.com

REV. 12/23
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