



## Features

- Shielded construction
- Carbonyl powder core
- High saturation current
- Low radiation
- Low buzz noise
- RoHS compliant\* and halogen free\*\*

## SRP3012CC Series - Shielded Power Inductors

### Electrical Specifications @ 25 °C

| Bourns Part No. | Inductance @ 100 kHz / 1 V |        | Q Min. | SRF (MHz) Typ. | DCR (mΩ) Typ. | DCR (mΩ) Max. | I <sub>rms</sub> (A) Typ. | I <sub>sat</sub> (A) Typ. |
|-----------------|----------------------------|--------|--------|----------------|---------------|---------------|---------------------------|---------------------------|
|                 | L (μH)                     | Tol. % |        |                |               |               |                           |                           |
| SRP3012CC-R15Y  | 0.15                       | 30     | 6      | 195            | 9.6           | 11            | 10                        | 14                        |
| SRP3012CC-R22M  | 0.22                       | 20     | 6      | 170            | 14            | 17            | 8                         | 12                        |
| SRP3012CC-R33M  | 0.33                       | 20     | 6      | 150            | 16            | 20            | 7                         | 9.8                       |
| SRP3012CC-R47M  | 0.47                       | 20     | 6      | 107            | 25            | 30            | 5                         | 6.5                       |
| SRP3012CC-R68M  | 0.68                       | 20     | 6      | 85             | 34            | 40            | 4.5                       | 5.8                       |
| SRP3012CC-1R0M  | 1.0                        | 20     | 10     | 65             | 50            | 60            | 3.3                       | 5.2                       |
| SRP3012CC-1R5M  | 1.5                        | 20     | 10     | 55             | 71            | 85            | 3                         | 4                         |
| SRP3012CC-2R2M  | 2.2                        | 20     | 10     | 45             | 98            | 115           | 2.7                       | 3.2                       |
| SRP3012CC-3R3M  | 3.3                        | 20     | 6      | 40             | 172           | 198           | 2                         | 2.6                       |
| SRP3012CC-4R7M  | 4.7                        | 20     | 10     | 35             | 245           | 282           | 1.6                       | 2.3                       |
| SRP3012CC-5R6M  | 5.6                        | 20     | 5      | 32             | 310           | 360           | 1.5                       | 2                         |
| SRP3012CC-6R8M  | 6.8                        | 20     | 10     | 29             | 360           | 400           | 1.4                       | 1.8                       |
| SRP3012CC-8R2M  | 8.2                        | 20     | 10     | 26             | 420           | 463           | 1.2                       | 1.5                       |
| SRP3012CC-100M  | 10                         | 20     | 10     | 23             | 450           | 520           | 1.1                       | 1.4                       |

### Additional Information

Click these links for more information:



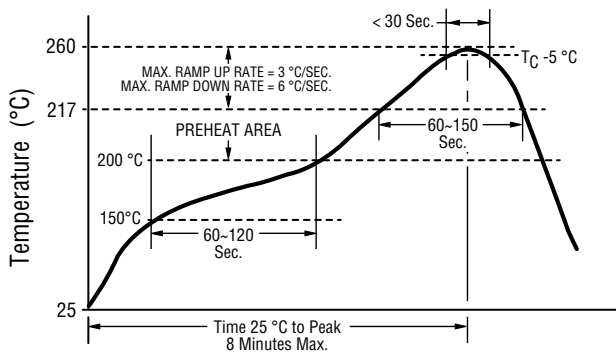
### General Specifications

Operating Temperature ..... -40 °C to +125 °C  
 (Temperature rise included)  
 Storage Temperature (Component) ..... -40 °C to +125 °C  
 Temperature Rise ..... 40 °C at rated I<sub>rms</sub><sup>1</sup>  
 Rated Current ..... Inductance drops 30 % at I<sub>sat</sub>  
 Moisture Sensitivity Level ..... 1  
 ESD Classification (HBM) ..... N/A  
<sup>1</sup>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 ..... Carbonyl powder  
 Wire ..... Enameled copper  
 Terminal Finish ..... Sn  
 Packaging ..... 4000 pcs. per 13-inch reel

### Soldering Profile



REFLOW TIMES: 3 TIMES MAX.

| Profile Feature  | Pb Free Assembly                   |
|--|------------------------------------|
| Preheat<br>- Temperature Min. (T <sub>smin</sub> )<br>- Temperature Max. (T <sub>smax</sub> )<br>- Time(t <sub>s</sub> ) from T <sub>smin</sub> to T <sub>smax</sub> | 150 °C<br>200 °C<br>60-120 seconds |
| Ramp-up Rate (T <sub>L</sub> to T <sub>p</sub> )   | 3 °C/second max.                   |
| Liquidous temperature (T <sub>L</sub> )<br>Time (t <sub>L</sub> ) maintained above T <sub>L</sub>  | 217 °C<br>60-120 seconds           |
| Peak package body temperature (T <sub>p</sub> )  | 260 °C                             |
| Time within 5 °C of Actual Peak Temperature (t <sub>p</sub> )  | <30 seconds                        |
| Ramp-Down Rate (T <sub>p</sub> to T <sub>L</sub> )   | 6 °C/second max.                   |
| Time 25 °C to Peak Temperature   | 8 minutes max.                     |



**WARNING Cancer and Reproductive Harm**  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

\* RoHS Directive 2015/863, Mar 31, 2015 and Annex.

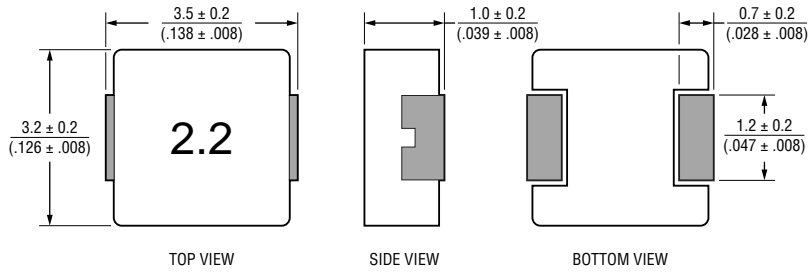
\*\* Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.

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# SRP3012CC Series - Shielded Power Inductors

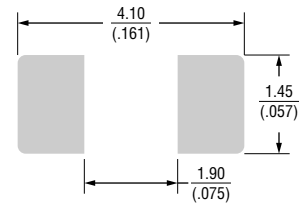
**BOURNS®**

## Product Dimensions



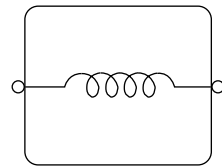
DIMENSIONS:  $\frac{\text{MM}}{\text{(INCHES)}}$

## Recommended Layout



DIMENSIONS:  $\frac{\text{MM}}{\text{(INCHES)}}$

## Electrical Schematic



## How to Order

**SRP3012CC - R15Y**

Model \_\_\_\_\_  
Value Code (see table) \_\_\_\_\_

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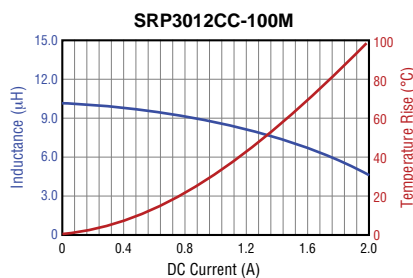
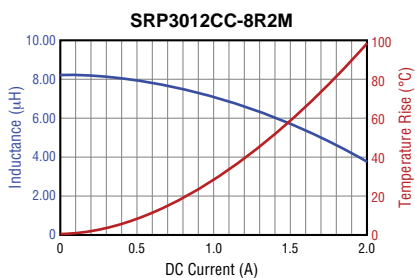
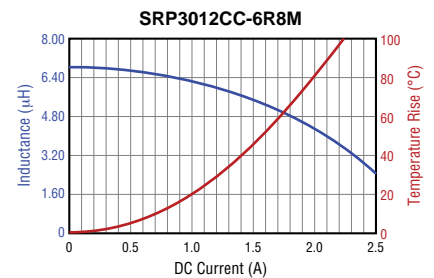
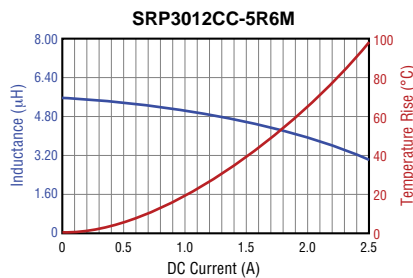
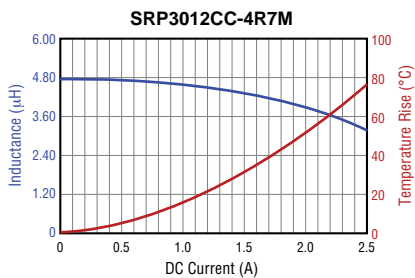
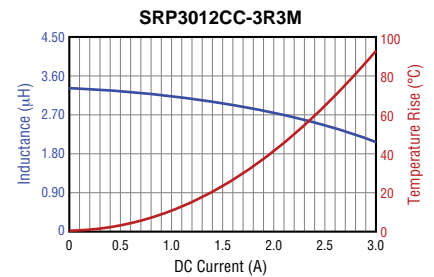
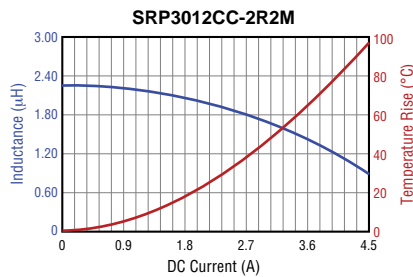
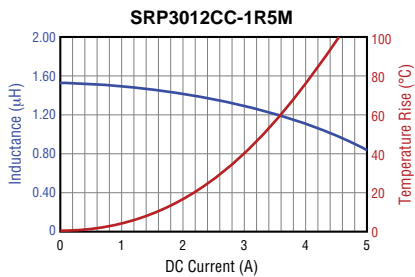
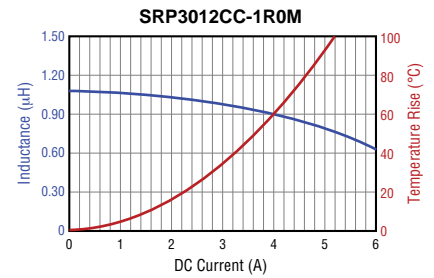
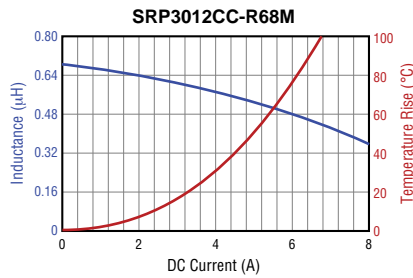
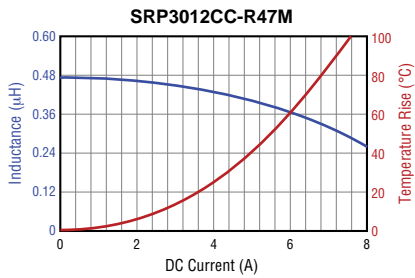
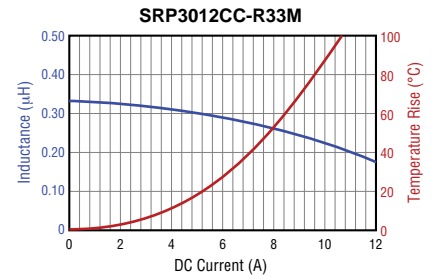
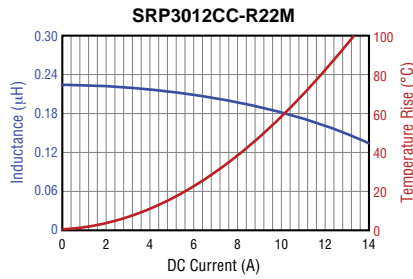
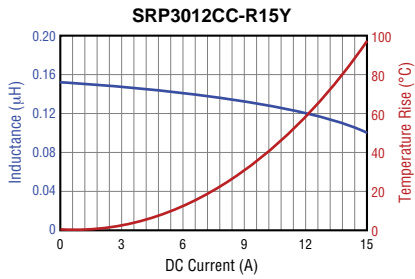
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# SRP3012CC Series - Shielded Power Inductors



## L vs. IDC and Temperature vs. IDC Curves



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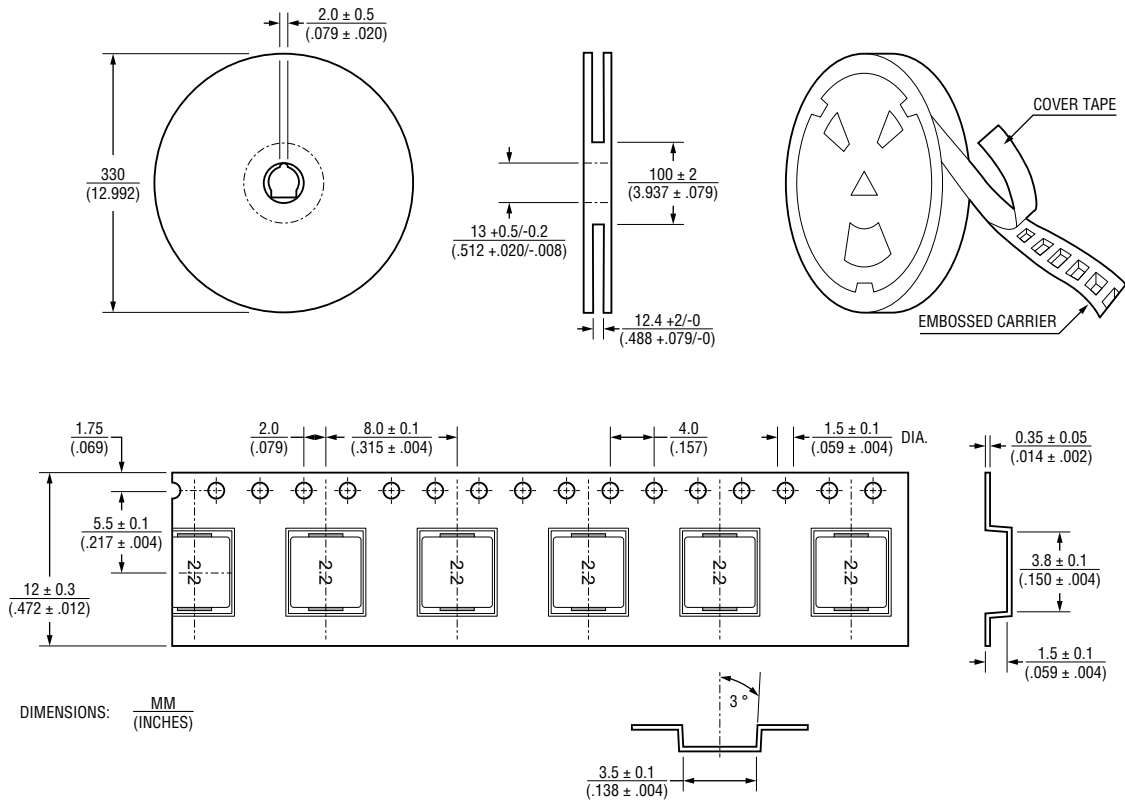
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# SRP3012CC Series - Shielded Power Inductors

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## Packaging Specifications



DIMENSIONS:  $\frac{\text{MM}}{\text{(INCHES)}}$

USER DIRECTION OF FEED  $\rightarrow$

QTY: 4000 PCS. PER REEL

**BOURNS®**

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