



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 _{rms} (A) Typ. | I _{sat} (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:



[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 Rise40 °C at rated I_{rms}¹
Rated Current

..... Inductance drops 30 % at I_{sat}

Moisture Sensitivity Level..... 1

ESD Classification (HBM)..... N/A

¹Circuit 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

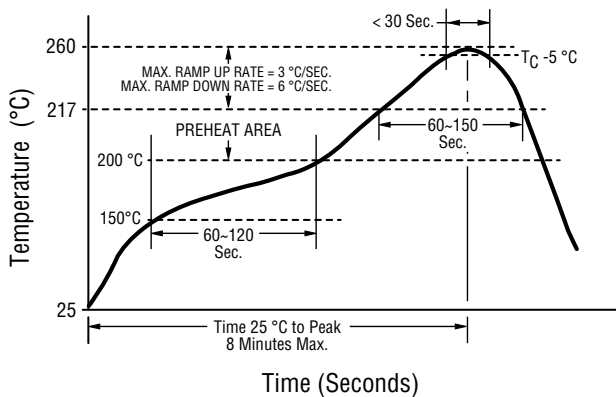
Core.....Carbonyl powder

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 - Temperature Min. (T _{smin}) - Temperature Max. (T _{smax}) - Time(t _s) from T _{smin} to T _{smax} | 150 °C 200 °C 60-120 seconds |
| Ramp-up Rate (T _L to T _p) | 3 °C/second max. |
| Liquidous temperature (T _L) Time (t _L) maintained above T _L | 217 °C 60-120 seconds |
| Peak package body temperature (T _p) | 260 °C |
| Time within 5 °C of Actual Peak Temperature (t _p) | <30 seconds |
| Ramp-Down Rate (T _p to T _L) | 6 °C/second max. |
| Time 25 °C to Peak Temperature | 8 minutes max. |



WARNING Cancer and Reproductive Harm

www.P65Warnings.ca.gov

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

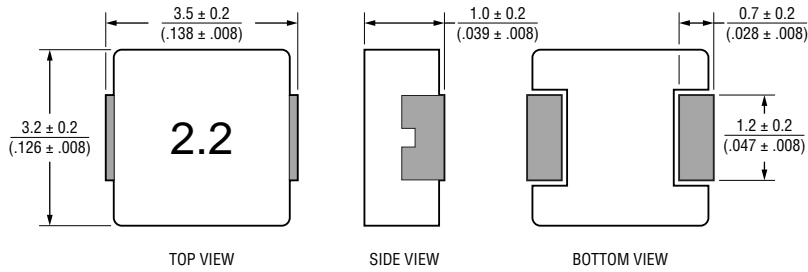
** Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.

Specifications are subject to change without notice. Users should verify actual device performance in their specific applications. The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at www.bourns.com/docs/legal/disclaimer.pdf.

SRP3012CC Series - Shielded Power Inductors

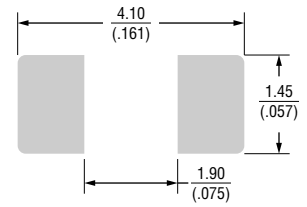
BOURNS®

Product Dimensions



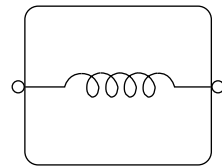
DIMENSIONS: $\frac{\text{MM}}{\text{(INCHES)}}$

Recommended Layout



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

Electrical Schematic



How to Order

SRP3012CC - R15Y

Model _____

Value Code (see table) _____

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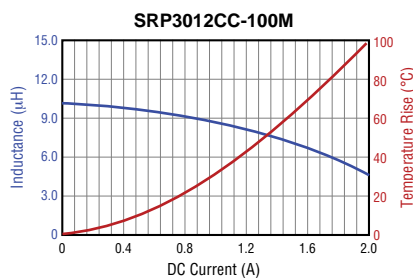
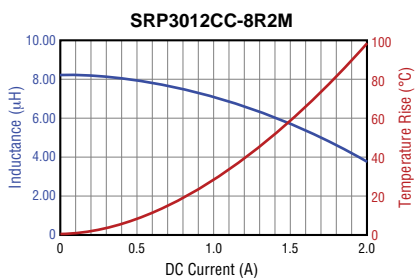
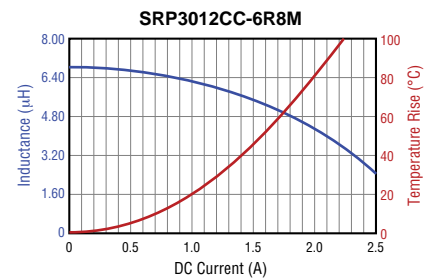
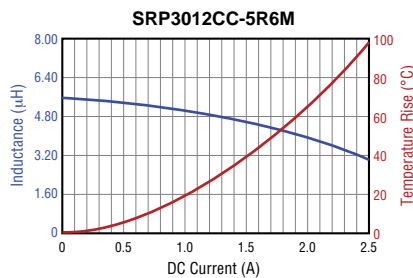
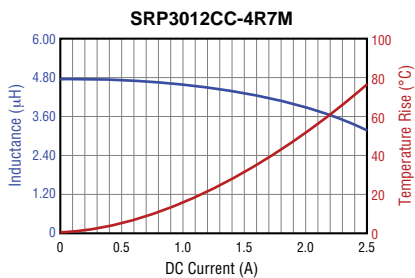
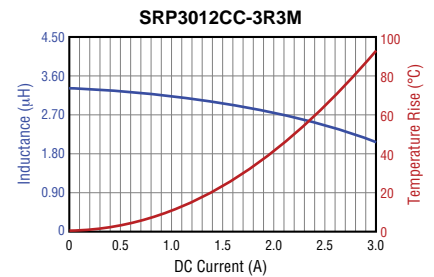
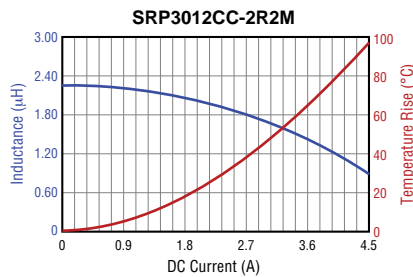
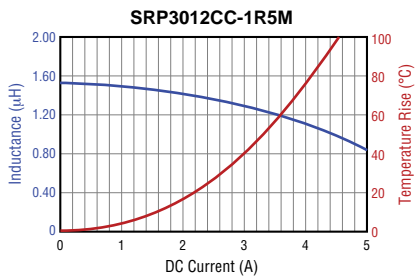
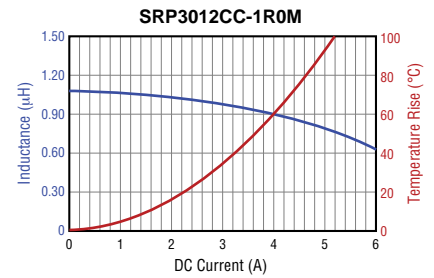
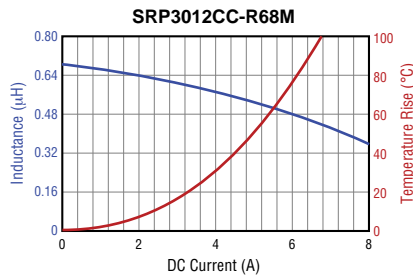
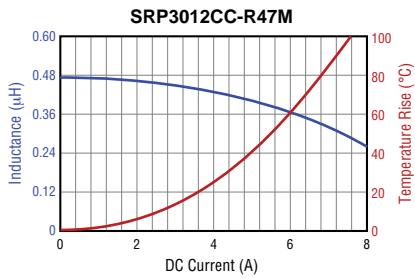
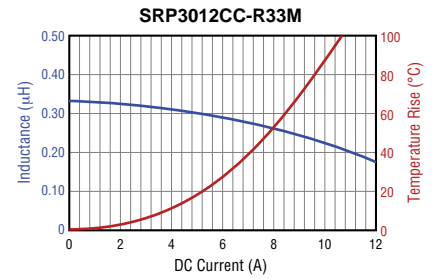
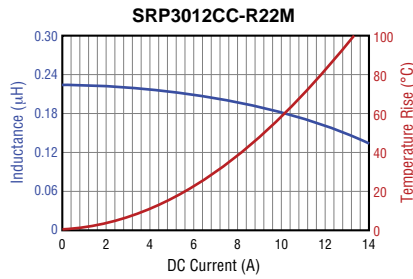
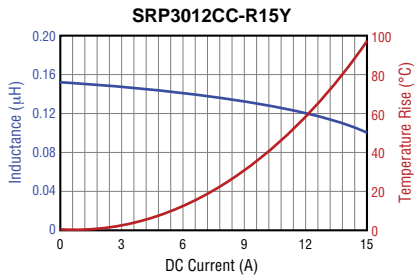
Users should verify actual device performance in their specific applications.

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L vs. IDC and Temperature vs. IDC Curves



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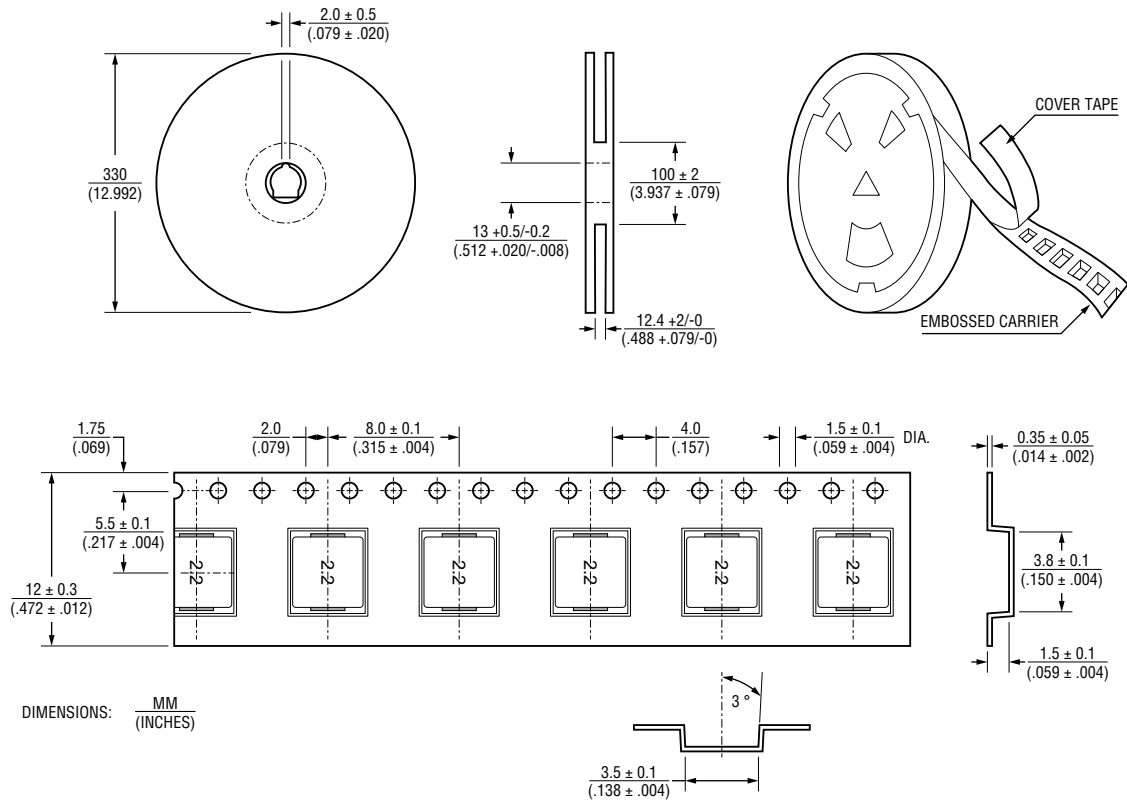
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Packaging Specifications



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

USER DIRECTION OF FEED \rightarrow
QTY: 4000 PCS. PER REEL

BOURNS®

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EMEA: Tel: +36 88 885 877 • Email: eurocus@bourns.com

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