



## 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:



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### 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

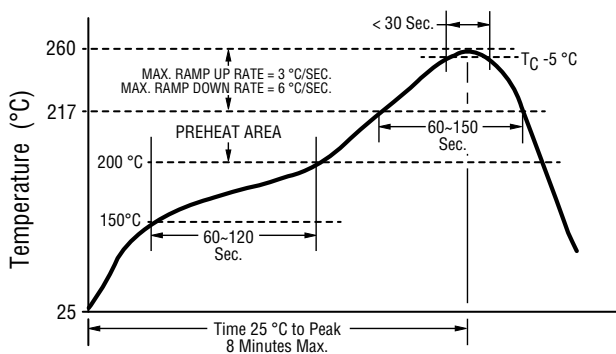
Core.....Carbonyl powder

Wire.....Enameled copper

Terminal Finish..... Sn

Packaging..... 4000 pcs. per 13-inch reel

### Soldering Profile



Time (Seconds)

REFLOW TIMES: 3 TIMES MAX.

Profile Feature	Pb Free Assembly
Preheat	
- Temperature Min. (T <sub>smin</sub> )	150 °C
- Temperature Max. (T <sub>smax</sub> )	200 °C
- Time(t <sub>s</sub> ) from T <sub>smin</sub> to T <sub>smax</sub>	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> )	217 °C
Time (t <sub>L</sub> ) maintained above T <sub>L</sub>	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.

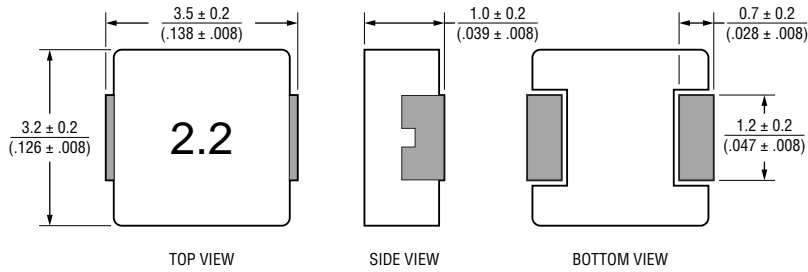
\*\* Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.

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# SRP3012CC Series - Shielded Power Inductors

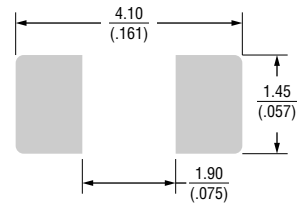


## Product Dimensions



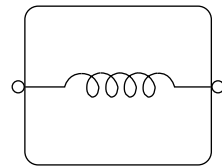
DIMENSIONS:  $\frac{\text{MM}}{\text{(INCHES)}}$

## Recommended Layout



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

## Electrical Schematic



## How to Order

**SRP3012CC - R15Y**

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

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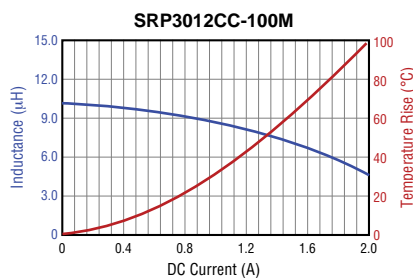
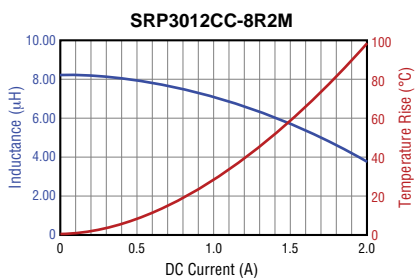
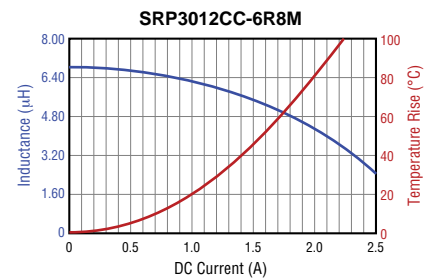
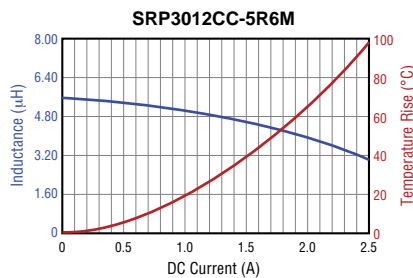
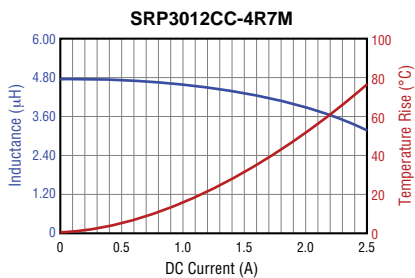
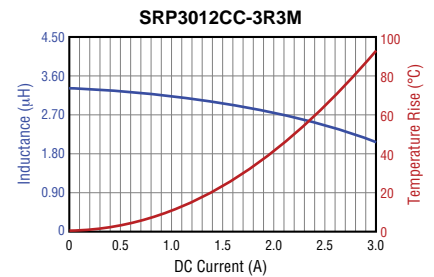
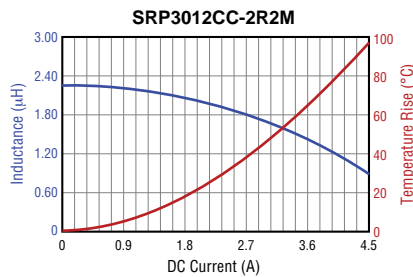
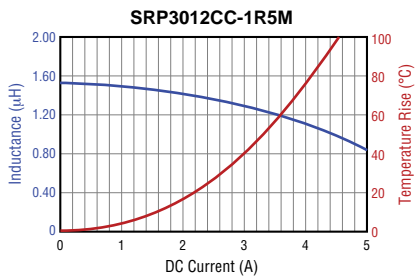
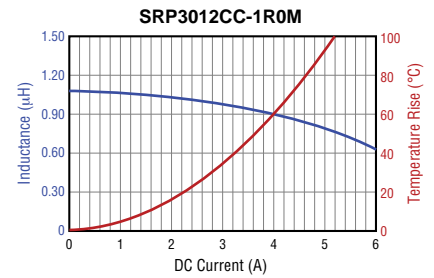
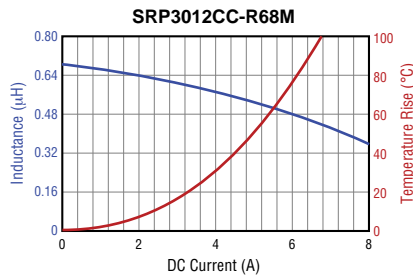
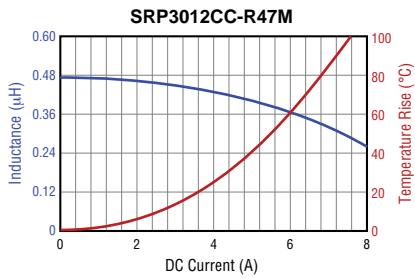
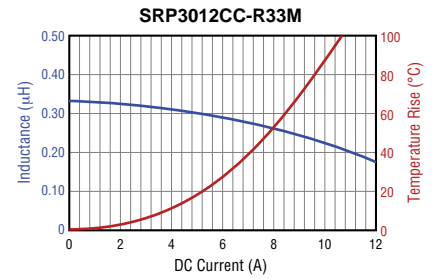
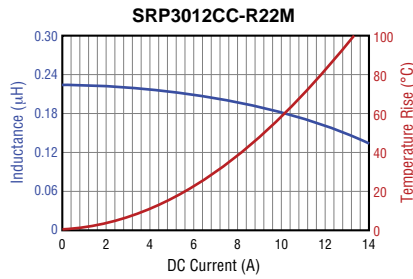
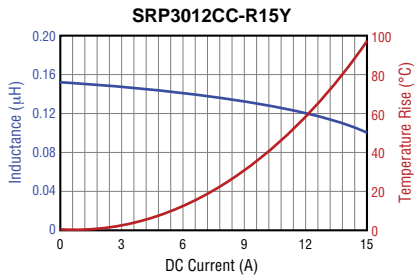
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## L vs. IDC and Temperature vs. IDC Curves



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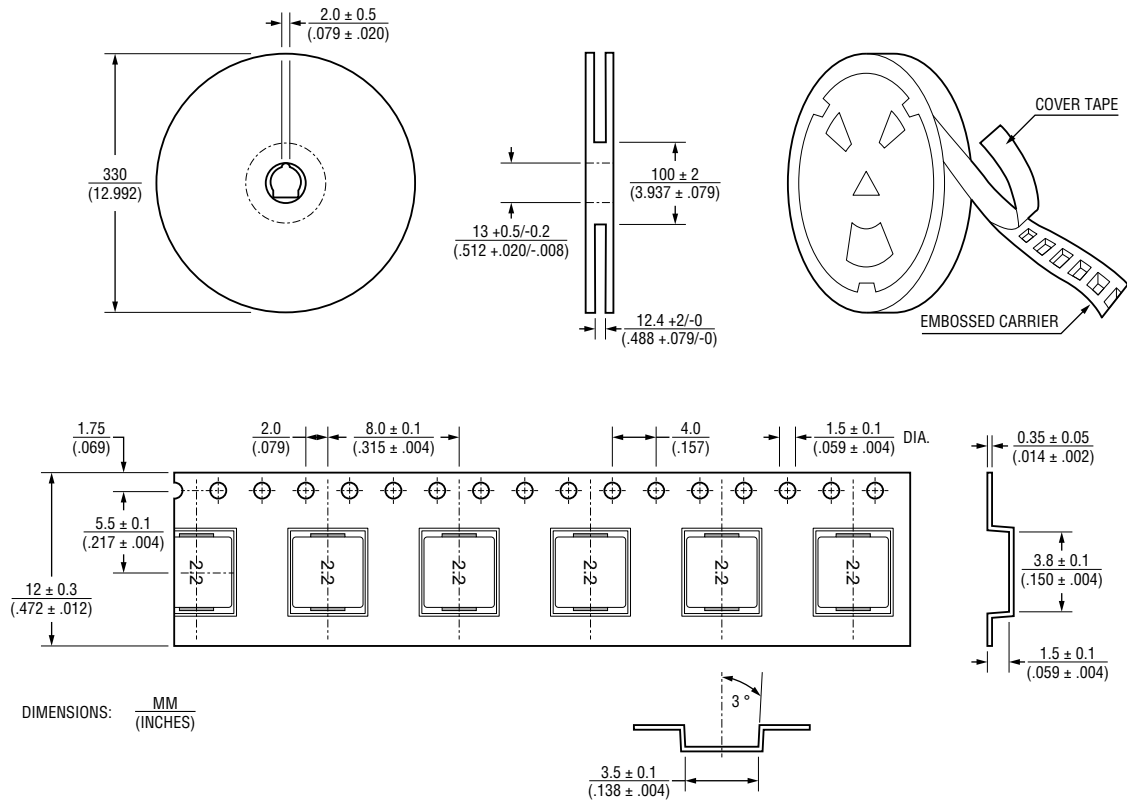
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# SRP3012CC Series - Shielded Power Inductors

# BOURNS®

## Packaging Specifications



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

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

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