



## Features

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

## SRP4012CC 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. %						
SRP4012CC-R10Y	0.10	30	5	400	4.3	5.5	11.5	25
SRP4012CC-R15Y	0.15	30	5	300	5.5	6.8	10	21.5
SRP4012CC-R22M	0.22	20	10	200	6.6	8	8.5	20
SRP4012CC-R33M	0.33	20	10	170	13.6	16	7	11
SRP4012CC-R36M	0.36	20	10	143	15.5	18	6.5	8.5
SRP4012CC-R47M	0.47	20	10	120	18	20	6.0	6.5
SRP4012CC-R68M	0.68	20	10	100	32	27	5.0	6
SRP4012CC-1R0M	1.0	20	10	80	41	47	4.0	6
SRP4012CC-1R2M	1.2	20	10	70	48	56	3.5	5
SRP4012CC-1R5M	1.5	20	10	62	55	63.3	3	4.0
SRP4012CC-2R2M	2.2	20	10	58	69.2	80	2.8	3.5
SRP4012CC-3R3M	3.3	20	10	41	84	97	2.3	3.0
SRP4012CC-4R7M	4.7	20	10	35	128	145	2	2.5
SRP4012CC-5R6M	5.6	20	10	30	180	208	1.7	2.3
SRP4012CC-6R8M	6.8	20	10	28	300	360	1.5	1.7
SRP4012CC-8R2M	8.2	20	10	25	313	376	1.4	1.6
SRP4012CC-100M	10	20	10	23	310	463	1.3	1.4
SRP4012CC-180M	18	20	10	15	860	960	0.9	1.1
SRP4012CC-220M	22	20	10	12	950	1050	0.8	1

### Additional Information

Click these links for more information:



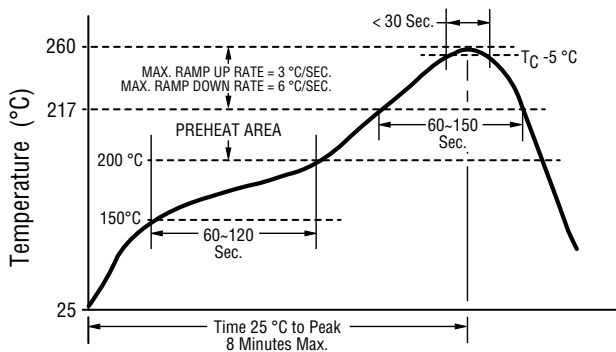
### General Specifications

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



Time (Seconds)

REFLOW TIMES: 3 TIMES MAX.

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

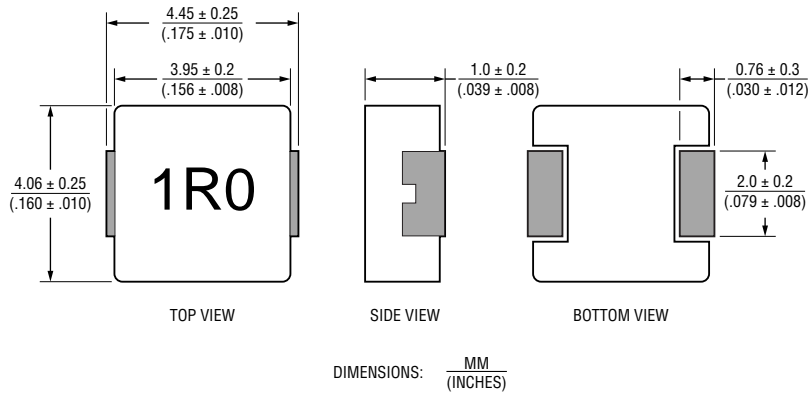
\*\* Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.

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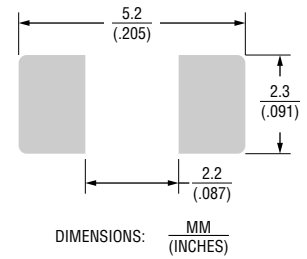
# SRP4012CC Series - Shielded Power Inductors

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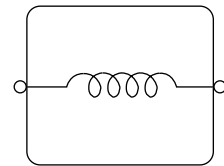
## Product Dimensions



## Recommended Layout



## Electrical Schematic

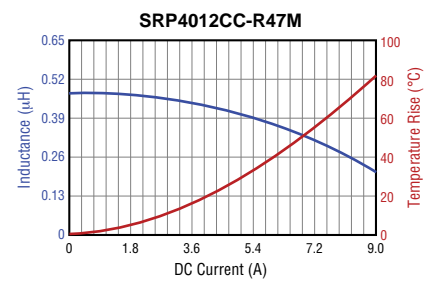
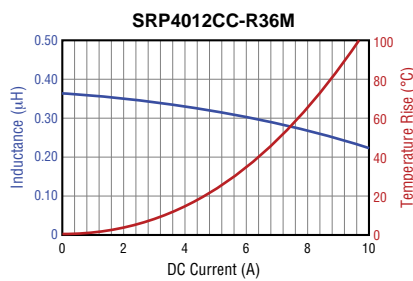
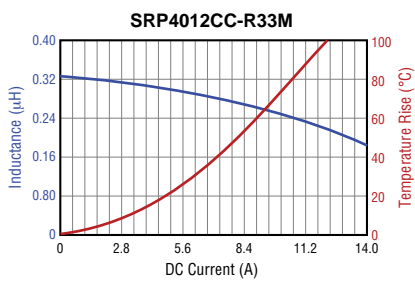
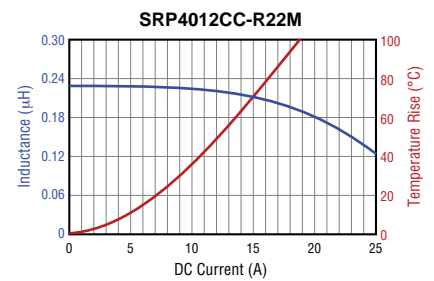
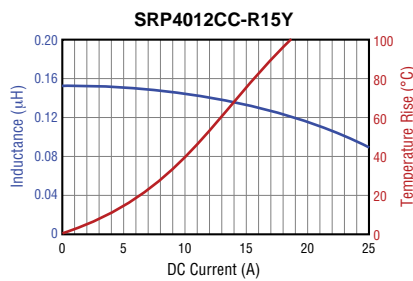
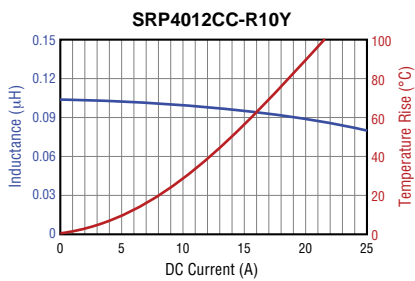


## How to Order

**SRP4012CC - R10Y**

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

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



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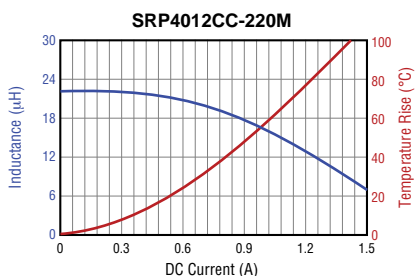
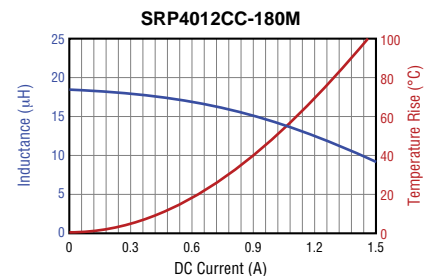
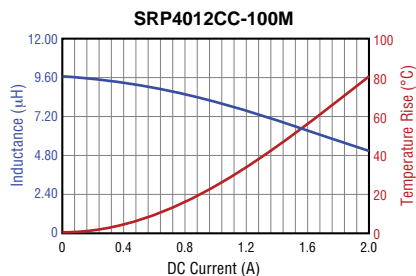
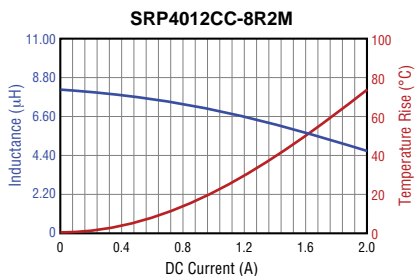
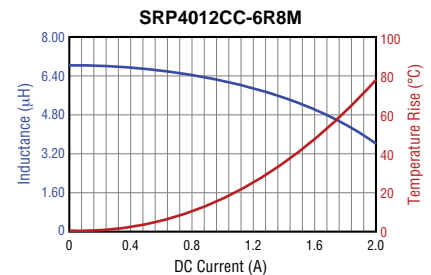
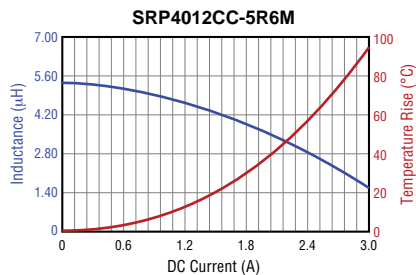
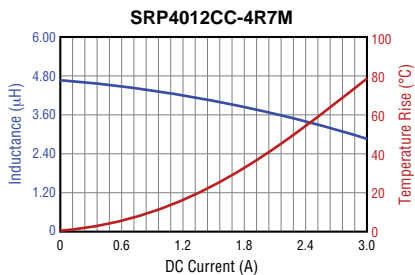
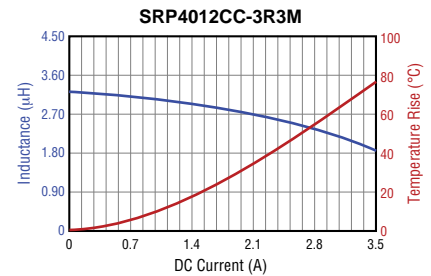
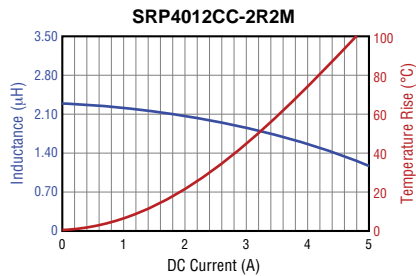
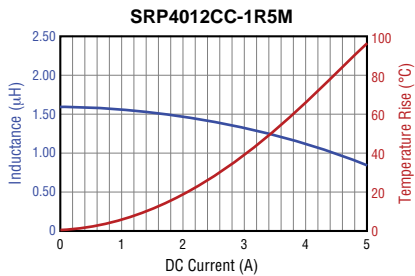
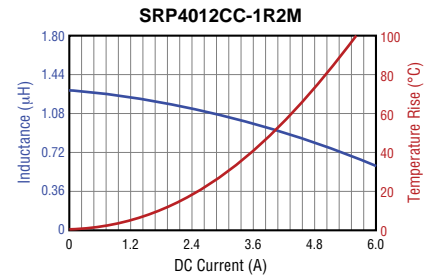
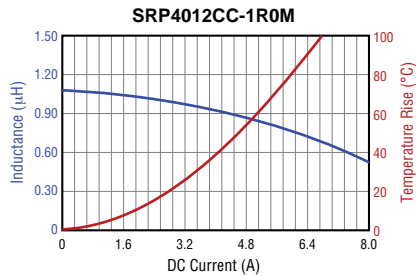
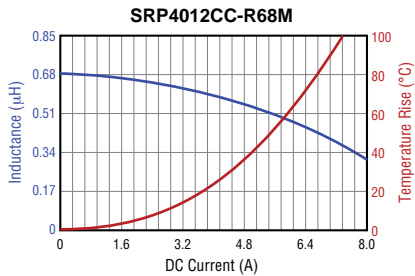
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# SRP4012CC Series - Shielded Power Inductors



## L vs. IDC and Temperature vs. IDC Curves (continued)



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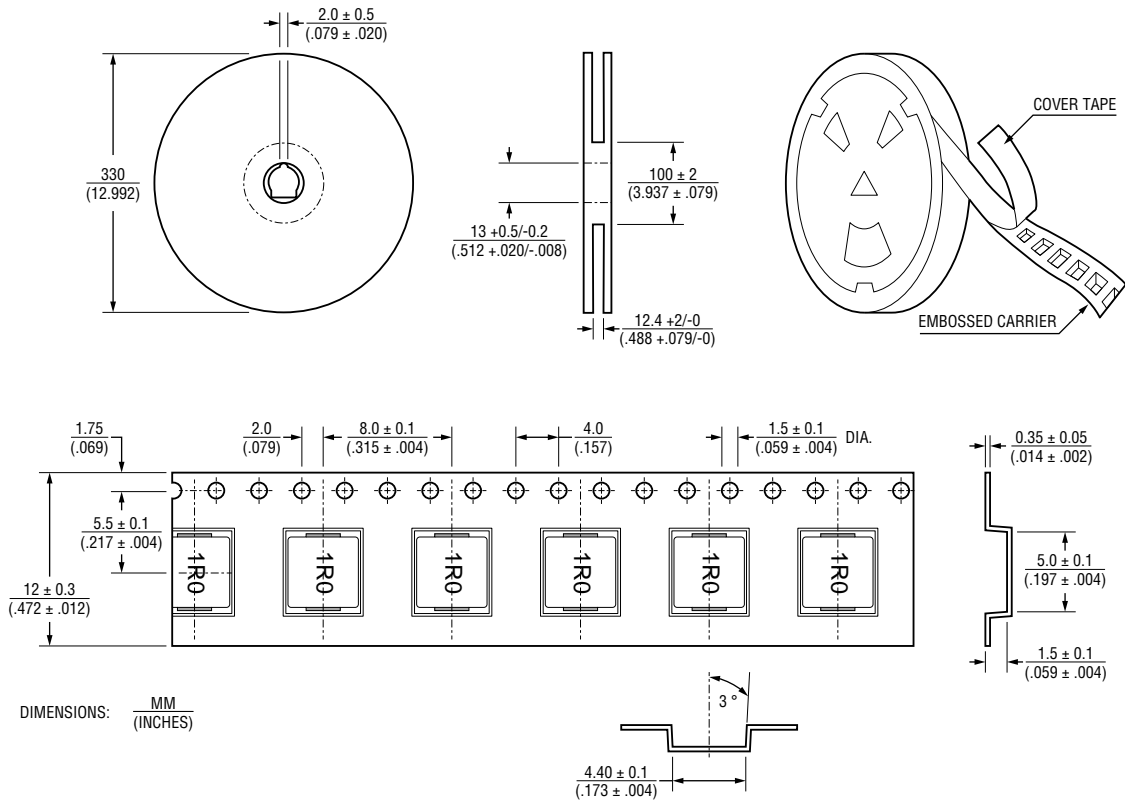
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# SRP4012CC Series - Shielded Power Inductors

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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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