

### Features

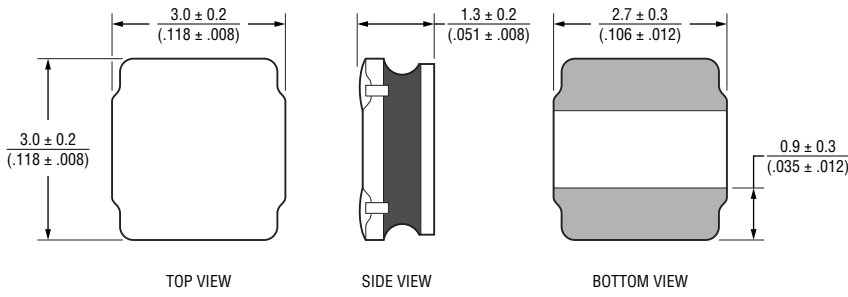
- Semi-shielded construction
- Miniature size
- RoHS compliant\* and halogen free\*\*

## SRN3015C Series – Semi-Shielded Power Inductors

### Electrical Specifications @ 25 °C

Bourns Part No.	Inductance @ 100 kHz / 1 V		Q @ 100 kHz / 1 V Typ.	SRF (MHz) Typ.	DCR (mΩ) Typ.	DCR (mΩ) Max.	I <sub>rms</sub> (A) Typ.	I <sub>sat</sub> (A) Typ.
	L (μH)	Tol. %						
SRN3015C-R24M	0.24	20	3	220	13	16	5.0	6.0
SRN3015C-R47M	0.47	20	10	160	18	22	3.7	4.3
SRN3015C-R68M	0.68	20	10	130	23	28	3.5	3.8
SRN3015C-1R0M	1.0	20	10	100	30	36	3.0	3.0
SRN3015C-1R5M	1.5	20	10	90	36	43	2.7	2.4
SRN3015C-2R2M	2.2	20	10	72	60	72	2.5	2.1
SRN3015C-3R3M	3.3	20	10	53	80	96	2.2	1.7
SRN3015C-4R7M	4.7	20	10	47	112	134	1.9	1.5
SRN3015C-5R6M	5.6	20	10	40	135	162	1.8	1.4
SRN3015C-6R8M	6.8	20	10	36	172	206	1.7	1.3
SRN3015C-100M	10	20	10	31	220	264	1.5	1.0
SRN3015C-150M	15	20	15	25	310	372	1.2	0.85
SRN3015C-180M	18	20	15	23	380	456	1.1	0.73
SRN3015C-220M	22	20	15	20	450	540	1.0	0.68
SRN3015C-330M	33	20	15	16	780	940	0.85	0.57
SRN3015C-470M	47	20	15	14	1200	1440	0.7	0.46
SRN3015C-101M	100	20	10	13	3400	4080	0.4	0.33

### Product Dimensions



Note: Top and side view dimensions do not include termination. For maximum overall dimensions including termination, add 0.1 mm.

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



**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. 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](http://www.bourns.com/docs/legal/disclaimer.pdf).

### Additional Information

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### General Specifications

Operating Temperature ..... -55 °C to +125 °C  
 (Temperature rise included)  
 Storage Temperature  
 (Component on board)  
 ..... -55 °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 Sensivity 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.

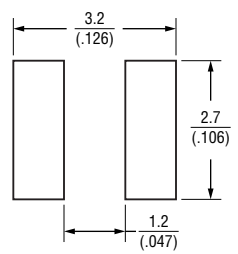
### Materials

Core..... Ferrite  
 Wire ..... Enameled copper  
 Terminal Finish ..... Ag/Ni/Sn  
 Coating ..... Magnetic resin  
 Packaging..... 2000 pcs. per 7-inch reel

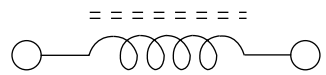
### How to Order

**SRN3015C - 1R0M**  
 Model \_\_\_\_\_  
 Value Code (see table) \_\_\_\_\_

### Recommended Layout



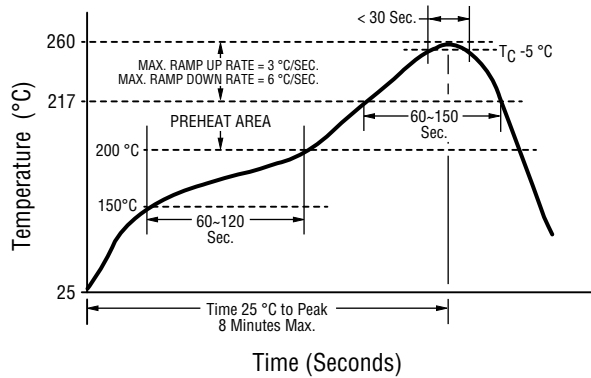
### Electrical Schematic



# SRN3015C Series Semi-shielded Power Inductors



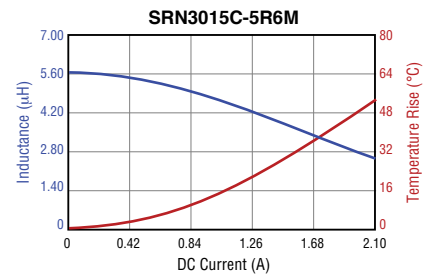
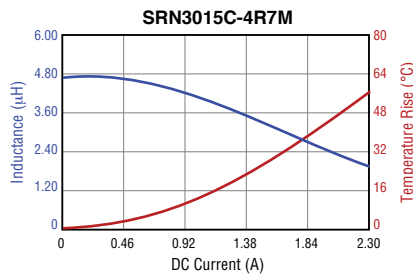
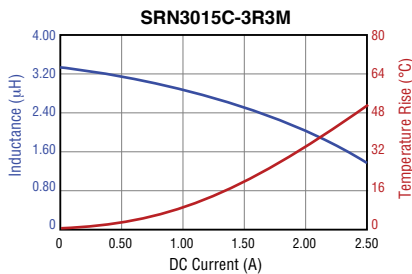
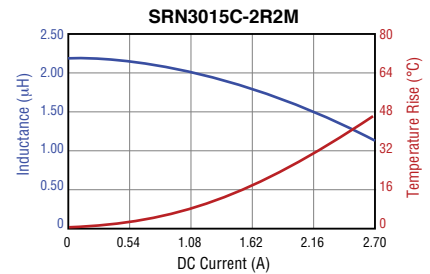
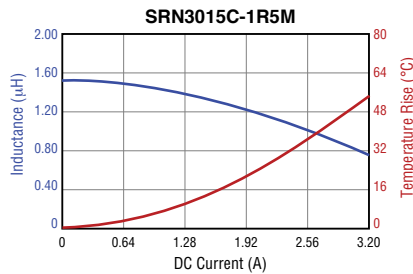
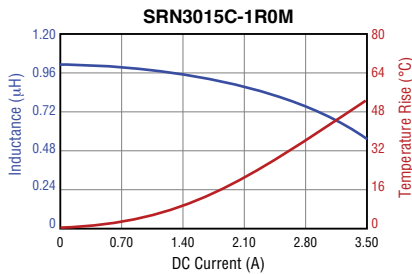
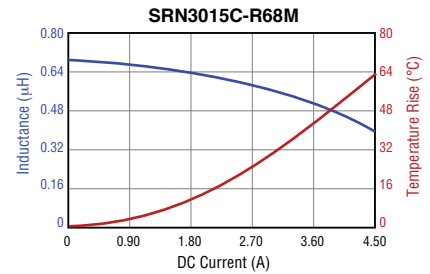
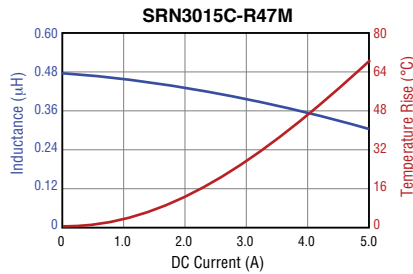
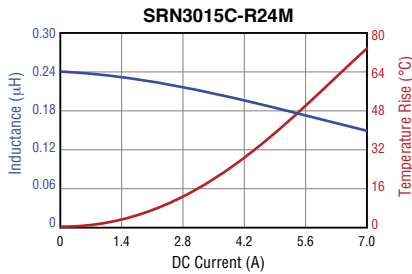
## Soldering Profile



REFLOW TIMES: 3 TIMES MAX.

Profile Feature	Pb Free Assembly
Preheat <ul style="list-style-type: none"> <li>- Temperature Min. (<math>T_{smin}</math>)</li> <li>- Temperature Max. (<math>T_{smax}</math>)</li> <li>- Time (<math>t_s</math>) from <math>T_{smin}</math> to <math>T_{smax}</math></li> </ul>	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 60-150 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.

## L vs. I Charts



Specifications are subject to change without notice.

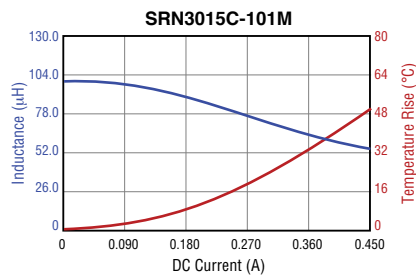
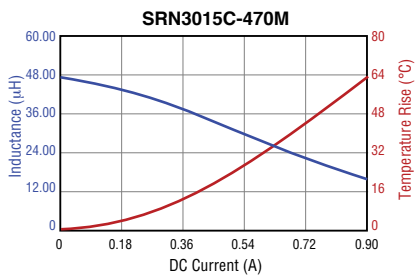
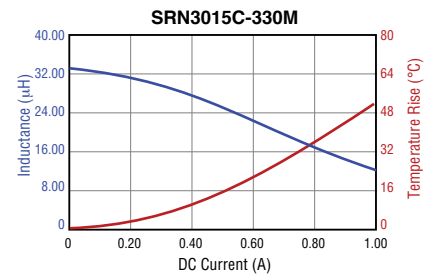
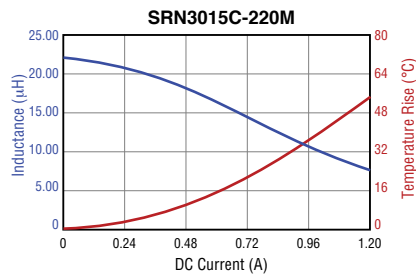
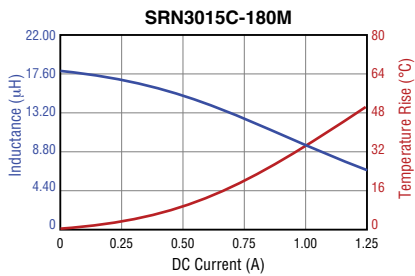
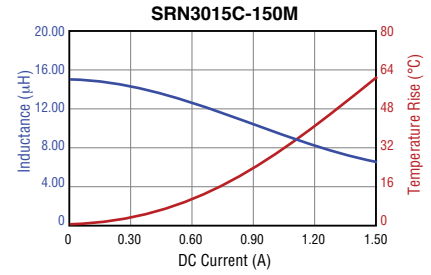
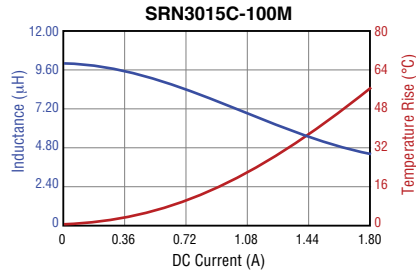
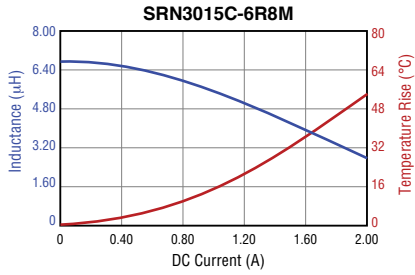
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# SRN3015C Series Semi-shielded Power Inductors



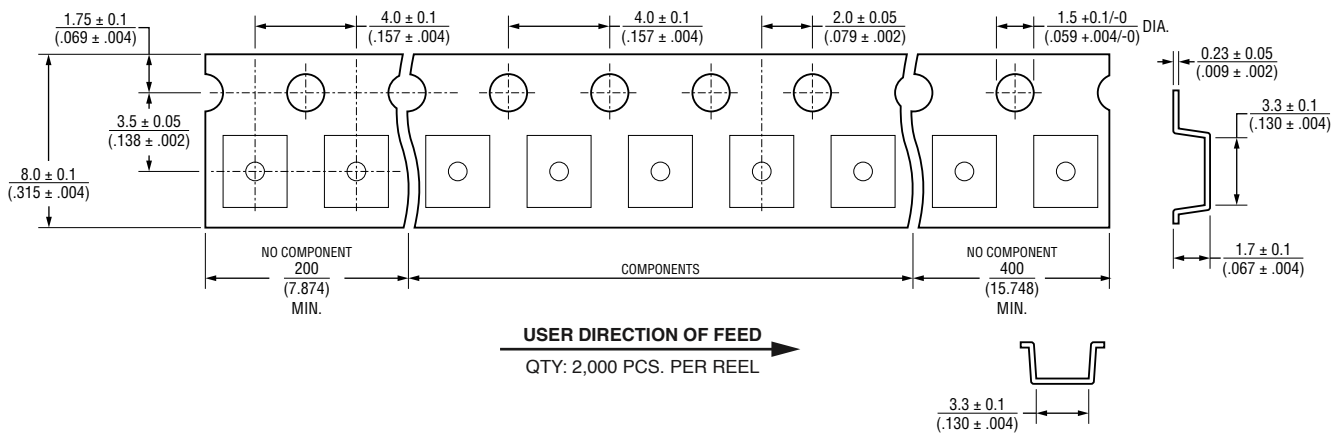
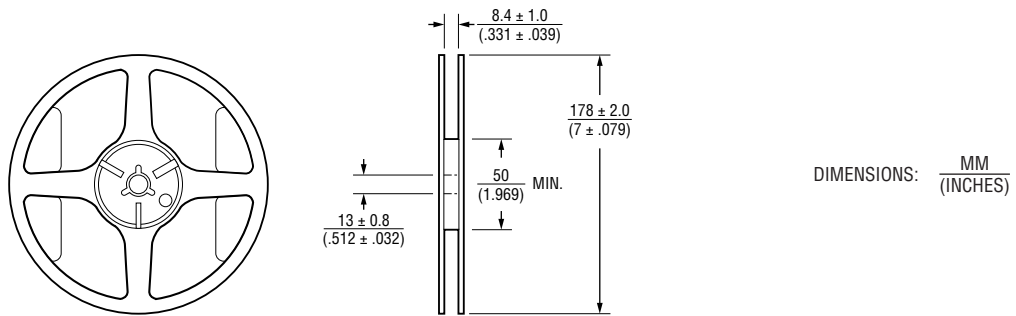
## L vs. I Charts (continued)



# SRN3015C Series Semi-shielded Power Inductors

**BOURNS®**

## Packaging Specifications



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