

## Features

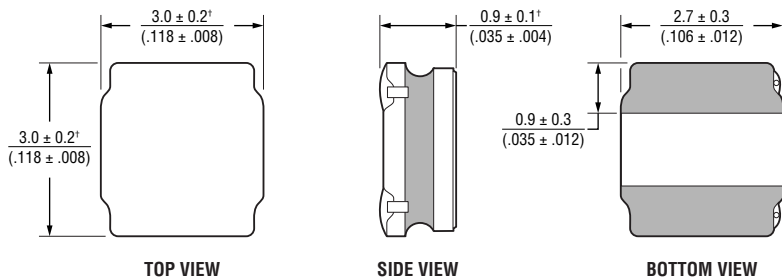
- Semi-shielded construction
- 1 mm max. profile
- Enhanced product reliability with soldered lead-wire
- AEC-Q200 compliant
- RoHS compliant\* and halogen free\*\*

## SRN3010BTA Series – Semi-shielded Power Inductors

### Electrical Specifications @ 25 °C

Bourns Part No.	Inductance @ 100 kHz / 1 V		Q @ 1 MHz 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. %						
SRN3010BTA-1R0M	1.00	±20	10	145	56	67	3.40	2.40
SRN3010BTA-1R2M	1.20	±20	10	135	60	72	3.10	2.10
SRN3010BTA-1R5M	1.50	±20	10	115	75	90	2.80	1.90
SRN3010BTA-2R2M	2.20	±20	10	101	100	120	2.60	1.80
SRN3010BTA-3R3M	3.30	±20	10	86	130	156	2.20	1.40
SRN3010BTA-4R7M	4.70	±20	10	72	190	228	1.80	1.30
SRN3010BTA-6R8M	6.80	±20	10	55	260	312	1.50	1.10
SRN3010BTA-8R2M	8.20	±20	10	45	330	396	1.30	1.00
SRN3010BTA-100M	10.0	±20	10	40	420	504	1.10	0.80
SRN3010BTA-150M	15.0	±20	10	33	565	678	0.90	0.65
SRN3010BTA-220M	22.0	±20	10	25	760	912	0.70	0.50
SRN3010BTA-470M	47.0	±20	10	16	1900	2280	0.45	0.36

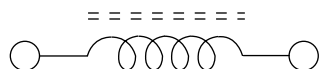
### Product Dimensions



† Dimension does not include termination. For maximum overall dimensions with termination, add 0.1 mm (.004 in.).

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

### Electrical Schematic



### How to Order

SRN3010BTA - 1R2M

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

### Additional Information

Click these links for more information:



### General Specifications

Operating Temperature ..... -55 °C to +125 °C  
(Temperature rise included)

Storage Temperature  
(Component on board) ..... -55 °C to +125 °C  
(In tape and reel package) ..... -10 °C to +40 °C, 50-60 % RH

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

Note 1: 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

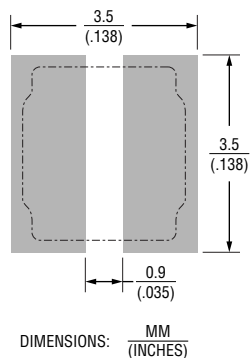
Wire ..... Enameled copper

Terminal Finish ..... Ag/Ni/Sn

Coating ..... Magnetic resin

Packaging ..... 3000 pcs. per 7-inch reel

### Recommended Layout



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

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

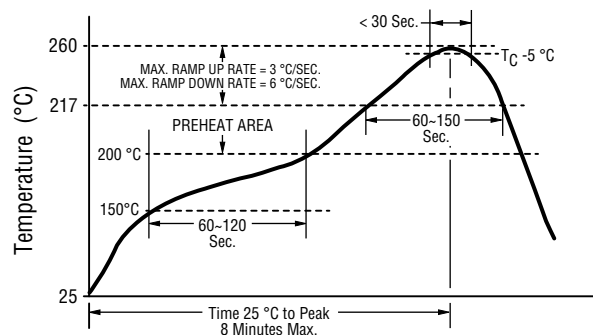
\*\* Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.

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## SRN3010BTA Series – Semi-shielded Power Inductors

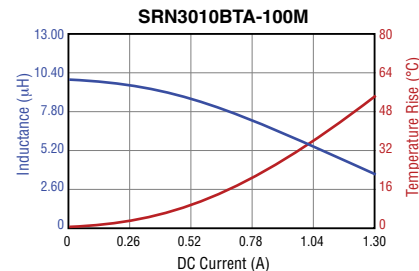
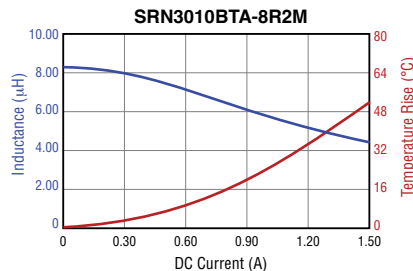
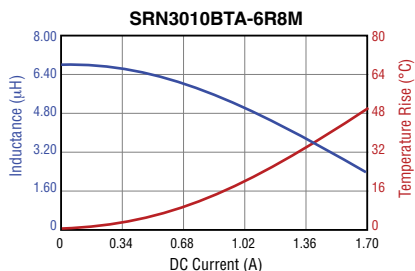
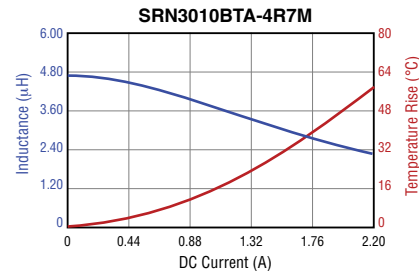
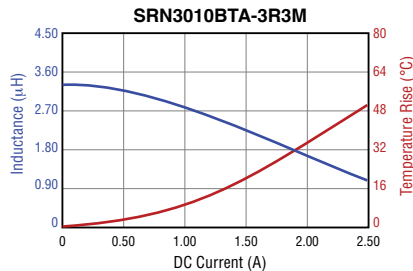
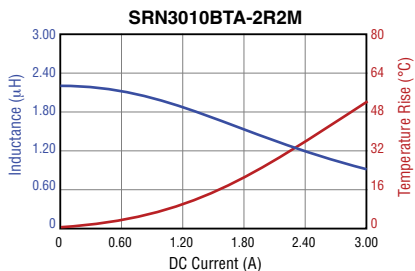
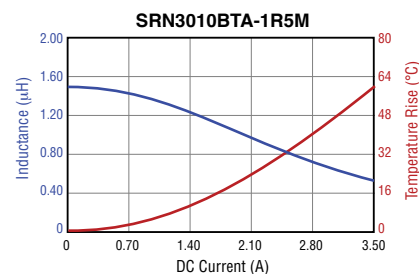
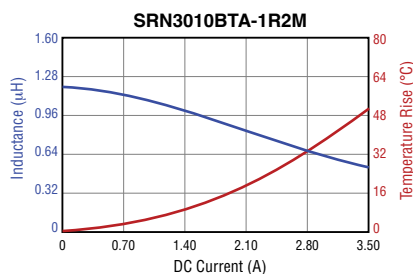
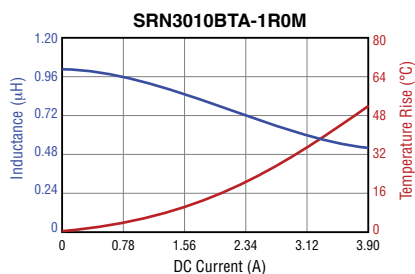
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### Soldering Profile



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 ( $T_L$ )	217 °C
Time ( $t_L$ ) maintained above $T_L$	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



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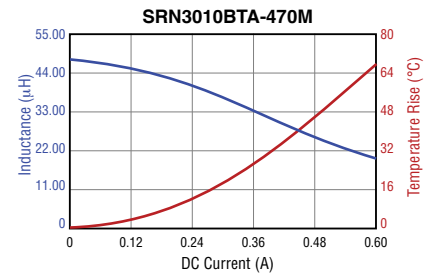
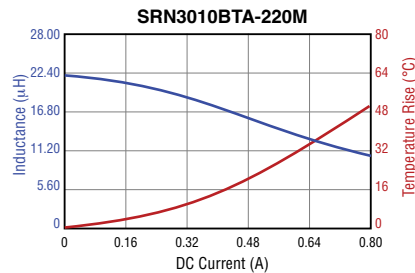
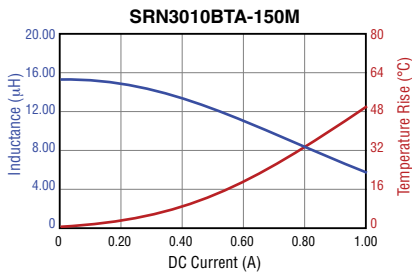
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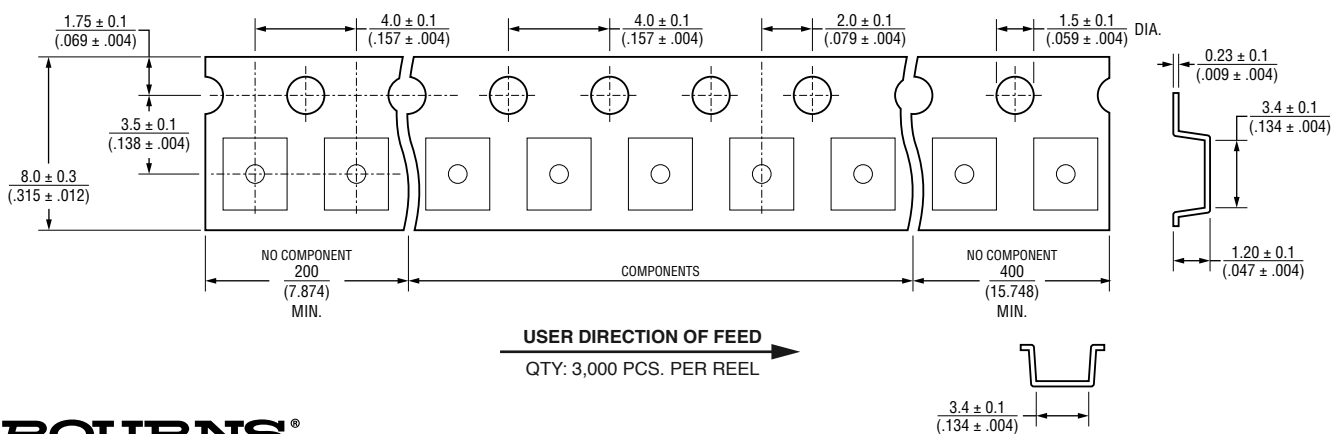
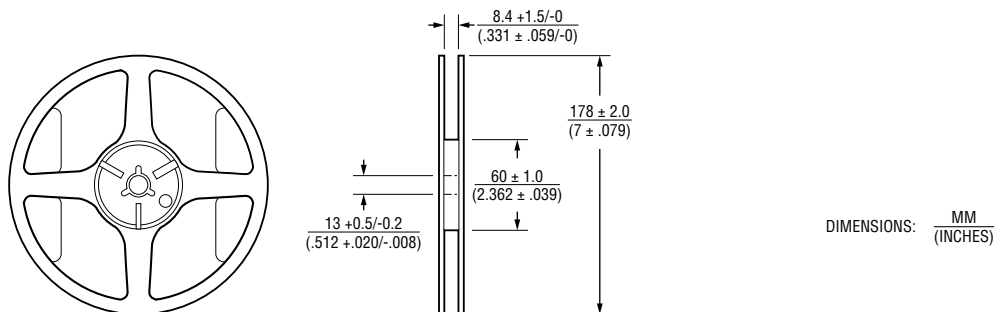
## SRN3010BTA Series – Semi-shielded Power Inductors

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### L vs. I Charts (continued)



### Packaging Specifications



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Americas: Tel: +1 951-781-5500 • Email: [americus@bourns.com](mailto:americus@bourns.com)

Mexico: Tel: +52-614-478-0400 • Email: [mexicus@bourns.com](mailto:mexicus@bourns.com)

Asia: Tel: +886-2-2562-4117 • Email: [asiacus@bourns.com](mailto:asiacus@bourns.com)

EMEA: Tel: +36 88 885 877 • Email: [eurocus@bourns.com](mailto:eurocus@bourns.com)

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