

## Features

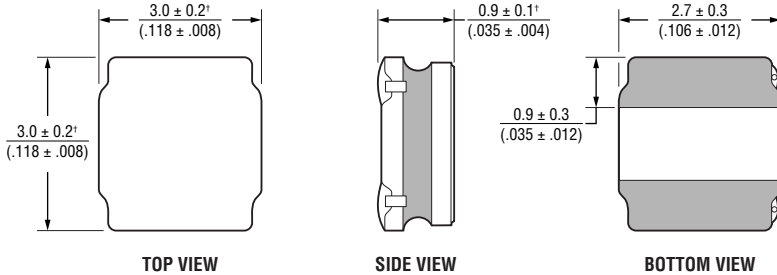
- Semi-shielded construction
- 1 mm max. profile
- Enhanced product reliability with soldered lead-wire
- AEC-Q200 compliant
- RoHS compliant\* and halogen free\*\*

## 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	1.0	20	10	145	56	67	3.4	2.4
SRN3010BTA-1R2M	1.2	20	10	135	60	72	3.1	2.1
SRN3010BTA-1R5M	1.5	20	10	115	75	90	2.8	1.9
SRN3010BTA-2R2M	2.2	20	10	101	100	120	2.6	1.8
SRN3010BTA-3R3M	3.3	20	10	86	130	156	2.2	1.4
SRN3010BTA-4R7M	4.7	20	10	72	190	228	1.8	1.3
SRN3010BTA-6R8M	6.8	20	10	55	260	312	1.5	1.1
SRN3010BTA-8R2M	8.2	20	10	45	330	396	1.3	1.0
SRN3010BTA-100M	10	20	10	40	420	504	1.1	0.8
SRN3010BTA-150M	15	20	10	33	565	678	0.9	0.65
SRN3010BTA-220M	22	20	10	25	760	912	0.7	0.5

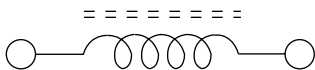
### Product Dimensions



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

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

### Electrical Schematic



### How to Order

SRN3010BTA - 1R2M

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

### Additional Information

Click these links for more information:



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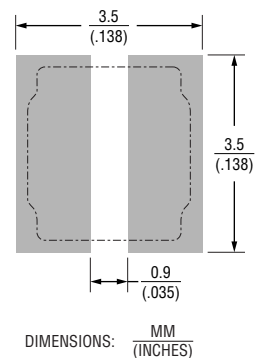
### General Specifications

Operating Temperature ..... -55 °C to +125 °C  
 (Temperature rise included)  
 Storage Temperature (Component on board) ..... -55 °C to +125 °C  
 (In tape and reel package) ..... -10 °C to +40 °C, 50-60 % RH  
 Temperature Rise ..... 40 °C at rated I<sub>rms</sub> / 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.

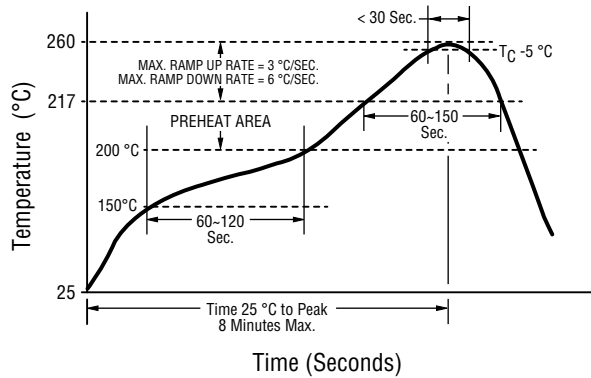
\*\* Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.

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# SRN3010BTA Series – Semi-shielded Power Inductors



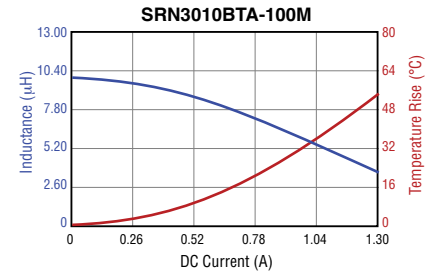
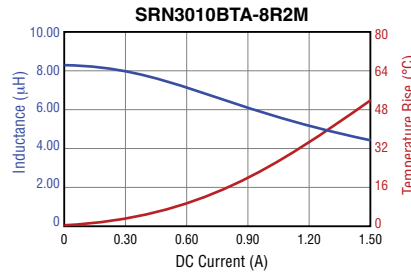
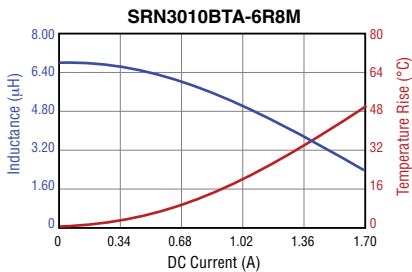
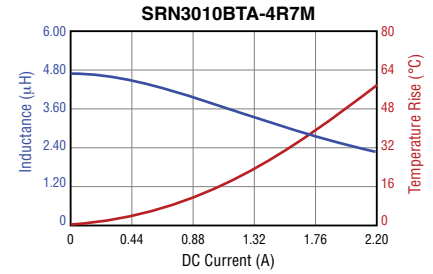
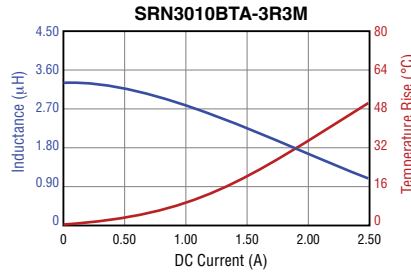
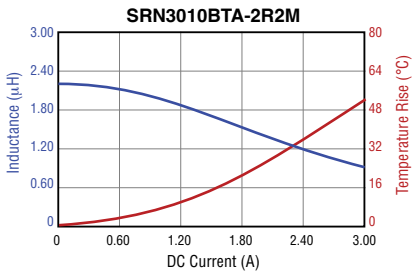
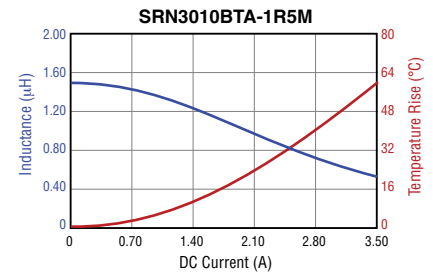
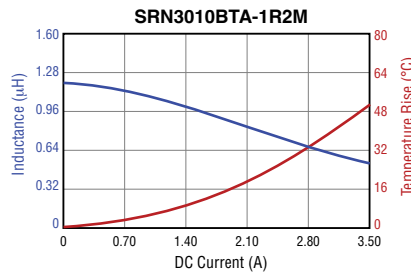
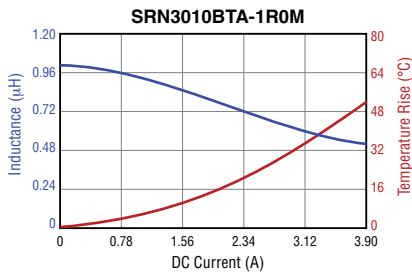
## Soldering Profile



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



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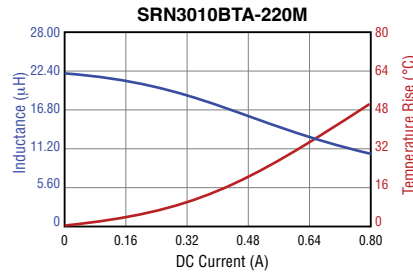
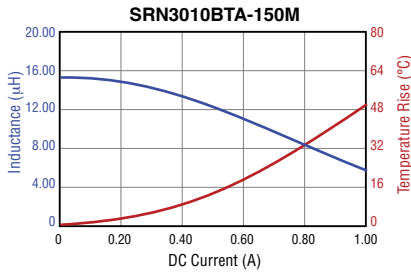
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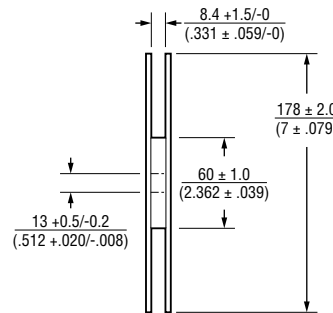
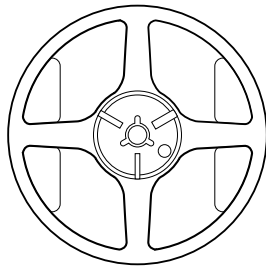
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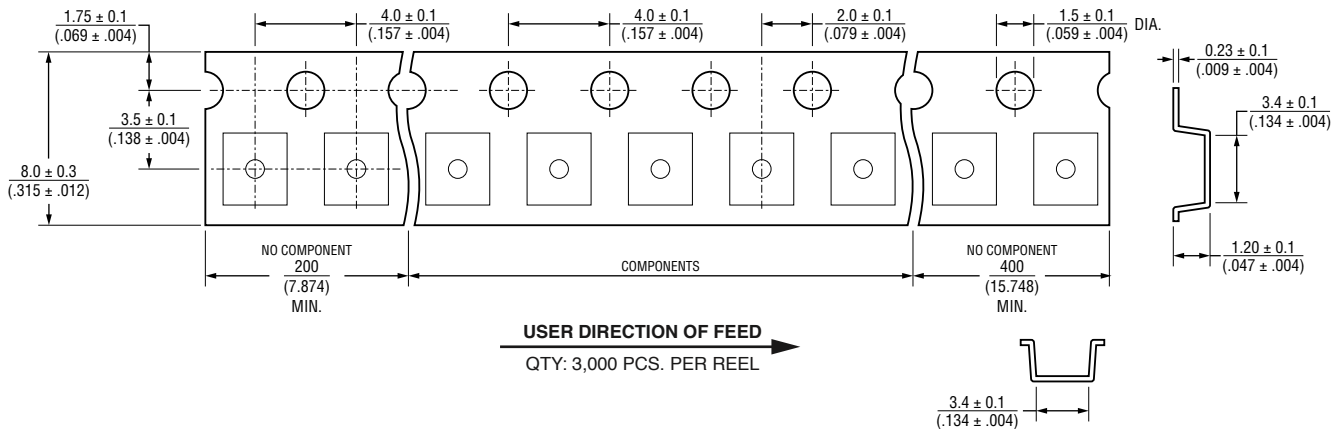
## L vs. I Charts (continued)



## Packaging Specifications



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



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