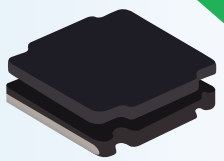
BOURNS®

AUTOMOTIVE GRADE

SRN3010BTA SERIES

Semi-shielded Power Inductors



*RoHS COMPLIANT & **HALOGEN FREE

Features

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

Applications

- Automotive systems
- Driver assist
- Infotainment
- Lighting
- DC-DC converters
- Power supplies
- Consumer electronics

Sustainability

- High pallet density for lower $C0_2$
- ISO 14001, low-impact energy
- Responsibly sourced and produced

Product Overview

The SRN3010BTA Series Semi-shielded Power Inductors feature semi-shielded construction and bottom-soldered lead-wire for enhanced product reliability.

These inductors are well suited for automotive systems, DC-DC converters, and power supplies in consumer, industrial, and telecom applications in which higher inductor reliability may be required.

Electrical Specifications @ T_A = 25 °C

Bourns Part Number	Inductance @ 100 kHz / 1 V		Q @ 1 MHz Min.	SRF (MHz) Typ.	DCR (mΩ) Typ.	DCR (mΩ) Max.	Irms (A) Typ.	Isat (A) Typ.
	L (µH)	Tolerance (%)						
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
NEW! SRN3010BTA-330M	33.0	±20	10	20	1270	1524	0.60	0.45
SRN3010BTA-470M	47.0	±20	10	16	1900	2280	0.45	0.36

How to Order

SRN3010BTA - 1R2M

Model

Value Code (see table)

Contact Information

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Asia-Pacific	+886-2 2562-4117	asiacus@bourns.com
Europe	+36 88 885 877	eurocus@bourns.com
Mexico	+52 614 478 0400	mexicus@bourns.com
The Americas	+1-951 781-5500	americus@bourns.com

* 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.
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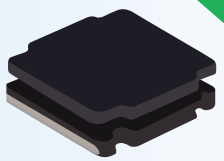
Semi-shielded Power Inductors



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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 Irms[1]

Rated Current ..... Inductance drops 30 % at Isat

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

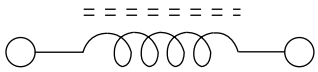
Wire ..... Enameled copper

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

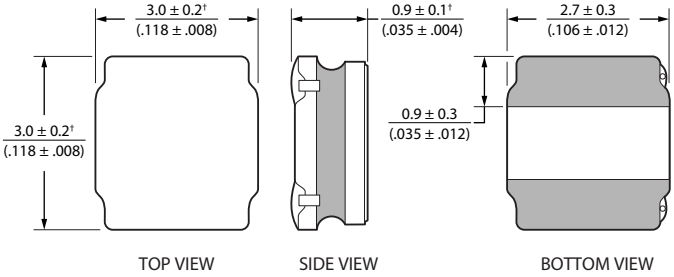
Coating ..... Magnetic resin

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

Electrical Schematic



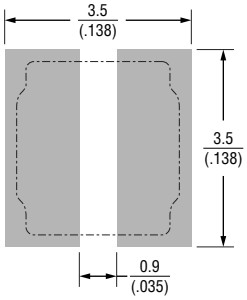
Product Dimensions



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

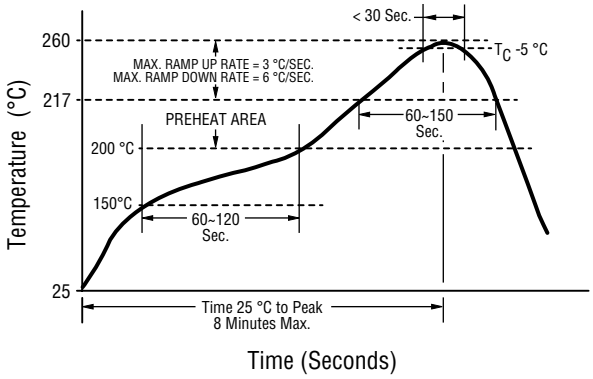
DIMENSIONS: MM (INCHES)

Recommended Layout



DIMENSIONS: MM (INCHES)

Soldering Profile



REFLOW TIMES: 3 TIMES MAX.

Profile Feature	Pb-Free Assembly
Preheat / Soak: Temperature Min. (T_{smin}) Temperature Max. (T_{smax}) Time (t_s) from (T_{smin} to T_{smax})	 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.

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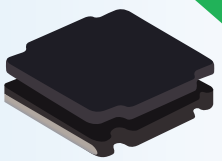

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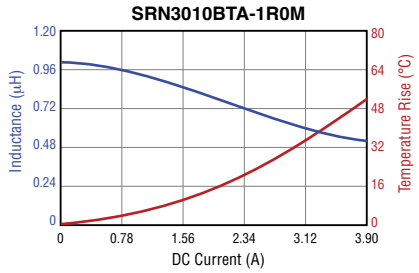
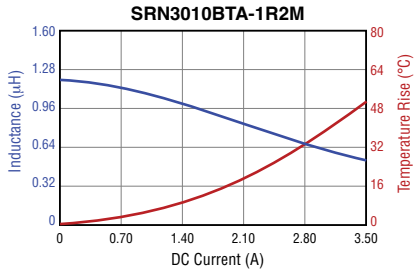
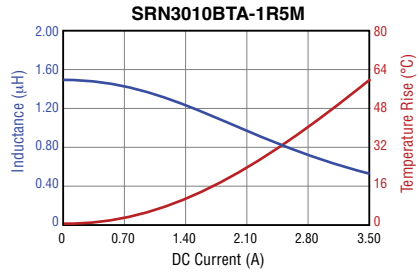
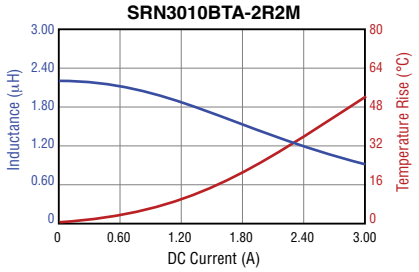
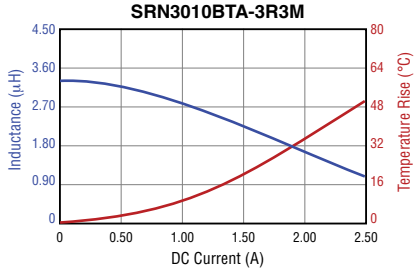
L v. I Charts

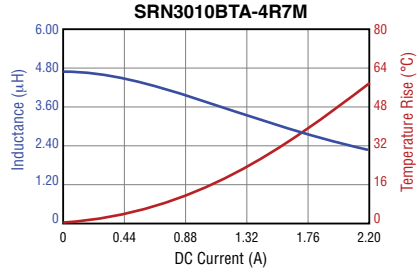


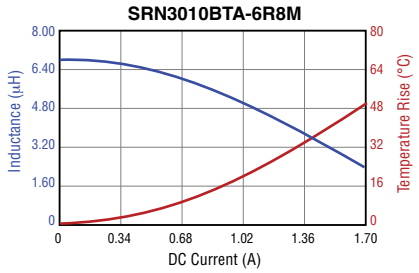


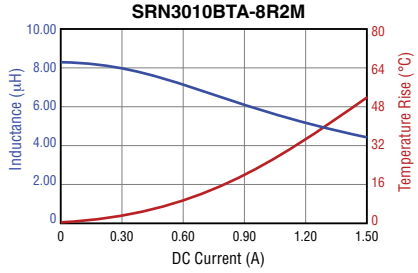


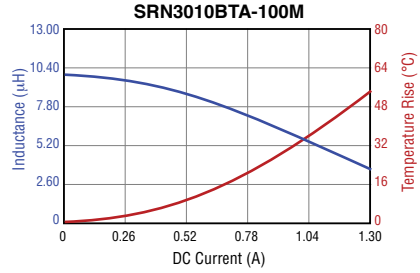


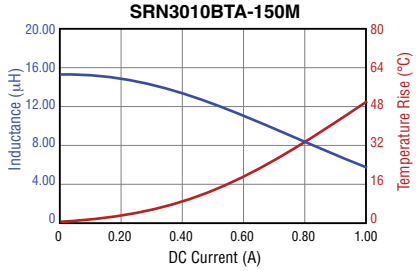


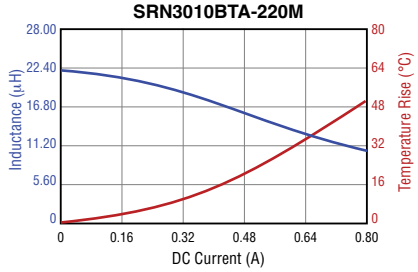


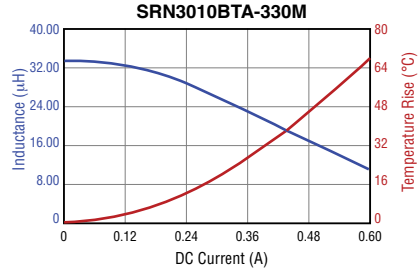


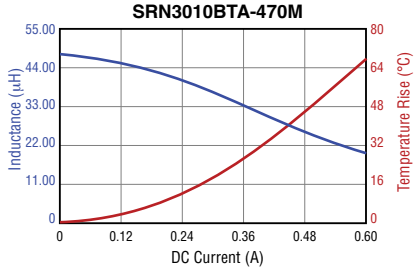












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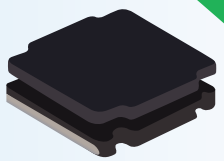

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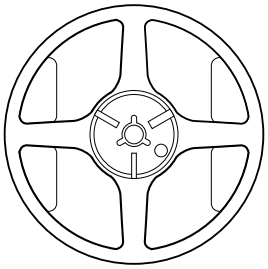
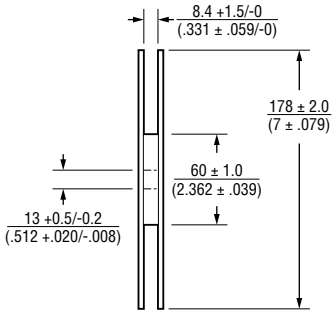
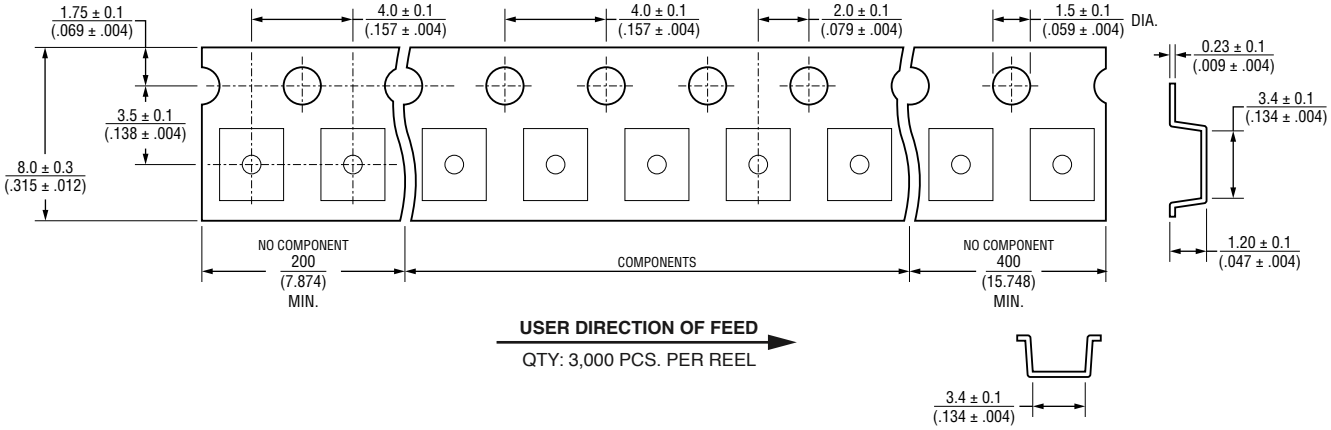
Packaging Specifications





DIMENSIONS: MM / (INCHES)



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