

***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 CO₂
- 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.	I _{rms} (A) Typ.	I _{sat} (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

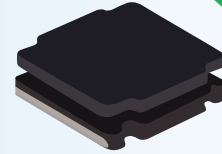
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* RoHS Directive 2015/863, Mar 31, 2015 and Annex.

** 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.



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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_{rms}^1

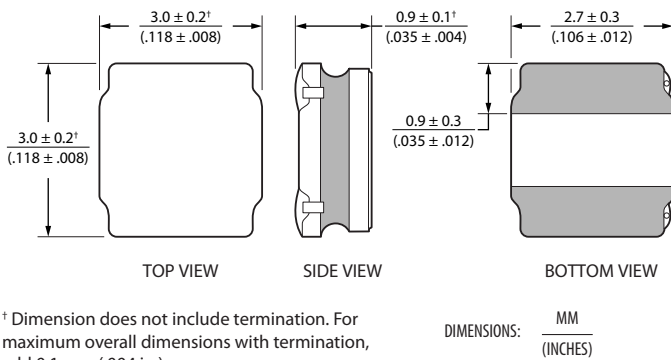
Rated Current Inductance drops 30 % at I_{sat}

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.

Product Dimensions



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

Materials

Core Ferrite

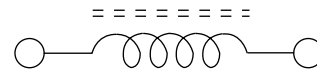
Wire Enameled copper

Terminal Finish Ag/Ni/Sn

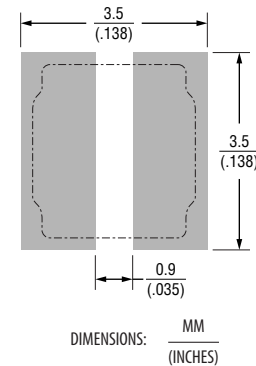
Coating Magnetic resin

Packaging 3000 pcs. per 7-inch reel

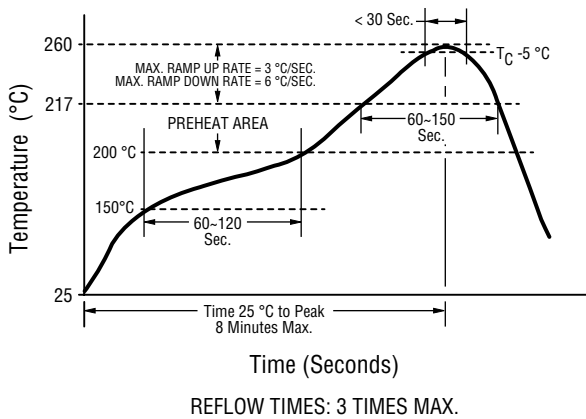
Electrical Schematic



Recommended Layout



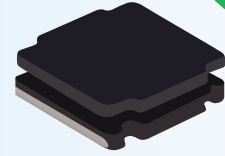
Soldering Profile



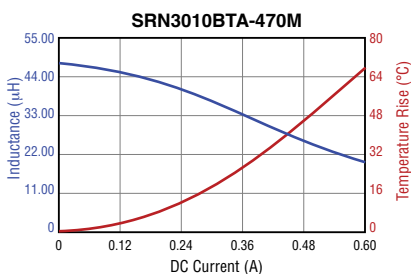
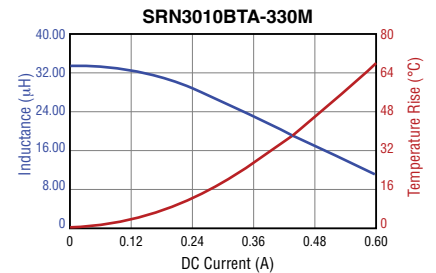
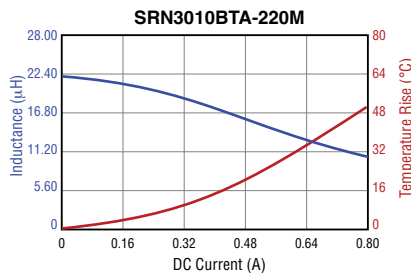
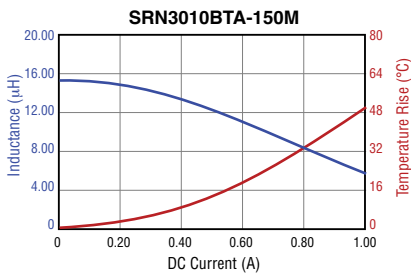
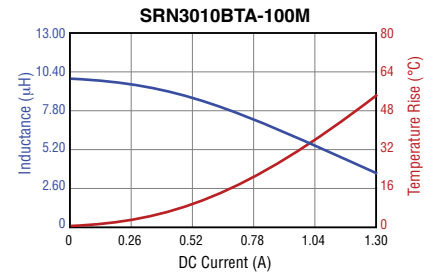
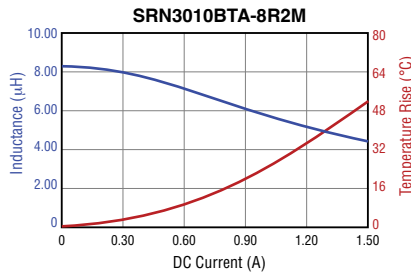
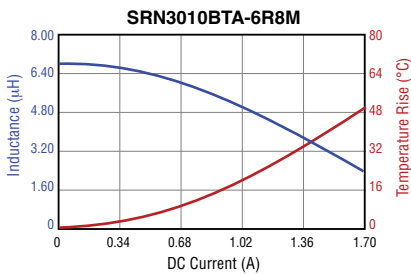
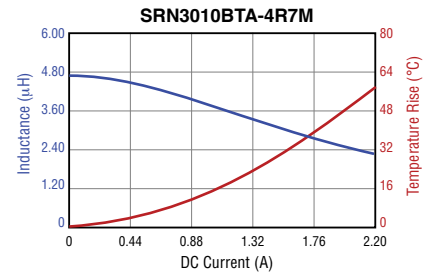
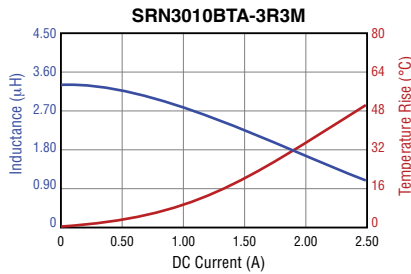
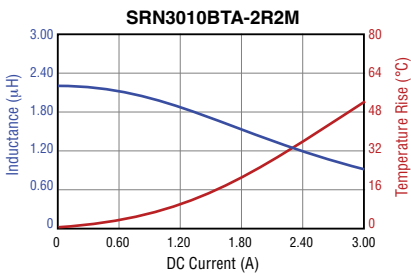
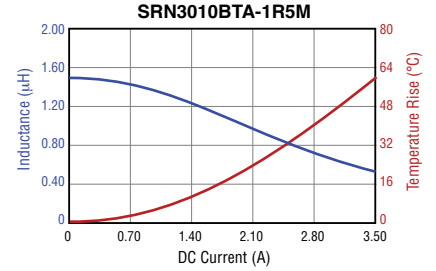
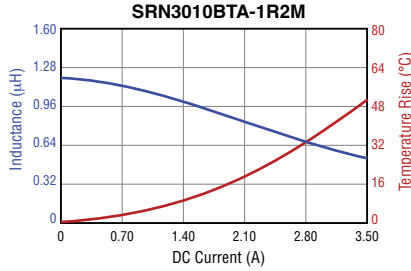
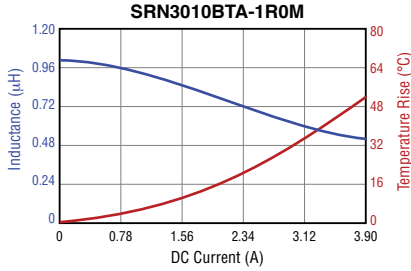
Profile Feature	Pb-Free Assembly
Preheat / Soak: Temperature Min. (T_{smin}) Temperature Max. (T_{smax}) Time (t_s) from (T_{smin} to T_{smax})	150 °C 200 °C 60~120 seconds
Ramp Up Rate (T_L to T_p)	3 °C / second max.
Liquidous Temperature (T_L) Time (t_l) maintained above T_L	217 °C 60~150 seconds
Peak 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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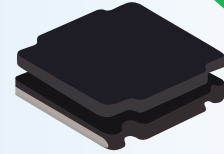


L v. I Charts



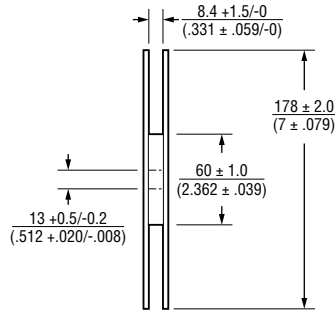
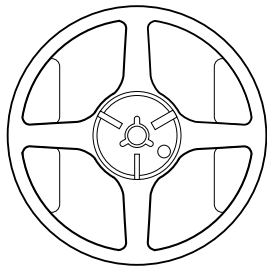
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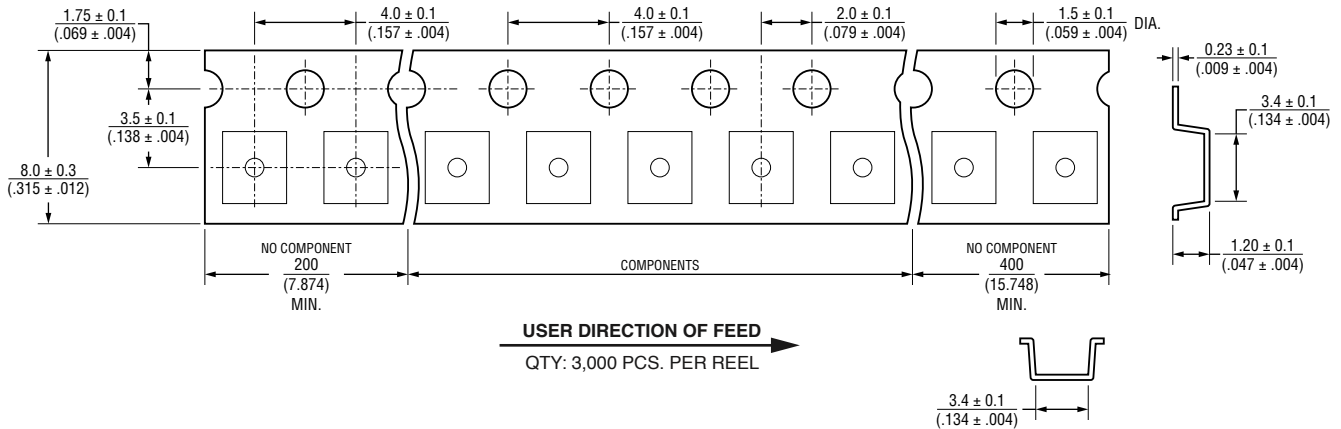


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Packaging Specifications



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



REV. 02/26

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