

Features

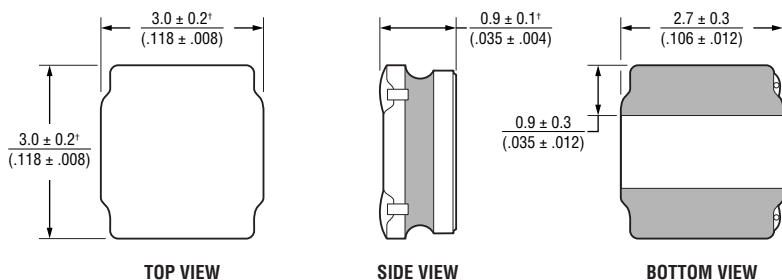
- Semi-shielded construction
- 1 mm max. profile
- Enhanced product reliability with soldered lead-wire
- AEC-Q200 compliant
- RoHS compliant* and halogen free**

SRN3010BTA Series - Semi-shielded Power Inductors

Electrical Specifications @ 25 °C

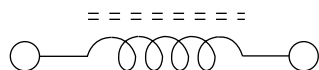
Bourns Part No.	Inductance @ 100 kHz / 1 V		Q @ 1 MHz Min.	SRF (MHz) Typ.	DCR (mΩ) Typ.	DCR (mΩ) Max.	I _{rms} (A) Typ.	I _{sat} (A) Typ.
	L (μH)	Tol. %						
SRN3010BTA-1R0M	1.0	20	10	145	56	67	3.4	2.4
SRN3010BTA-1R2M	1.2	20	10	135	60	72	3.1	2.1
SRN3010BTA-1R5M	1.5	20	10	115	75	90	2.8	1.9
SRN3010BTA-2R2M	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



† 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:



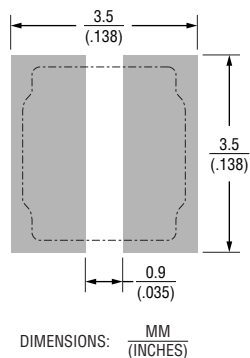
General Specifications

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.

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

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

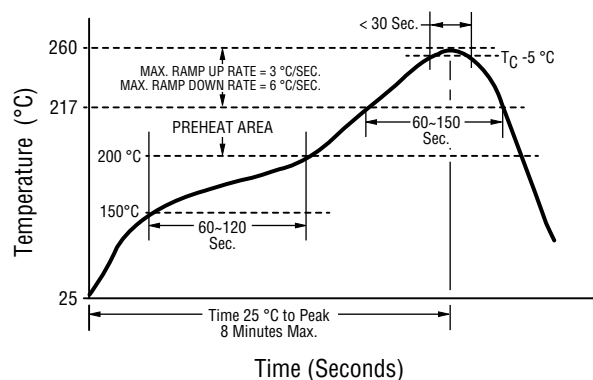
** Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.

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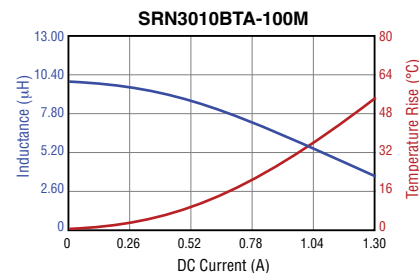
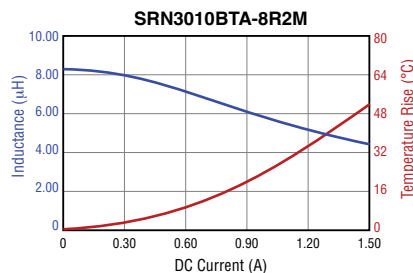
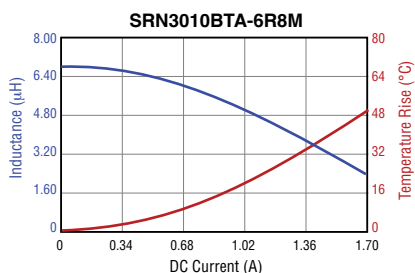
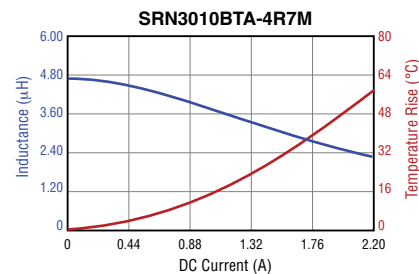
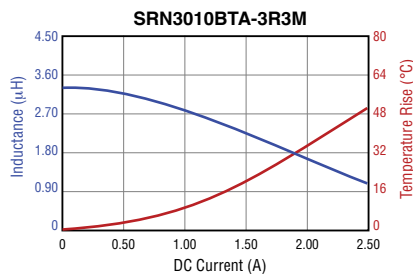
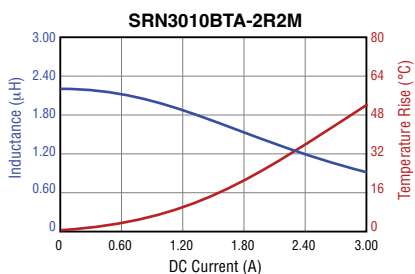
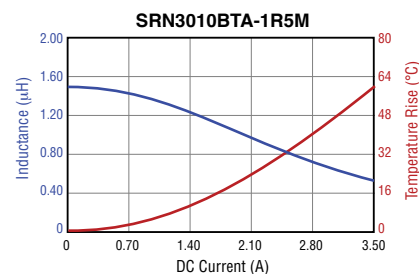
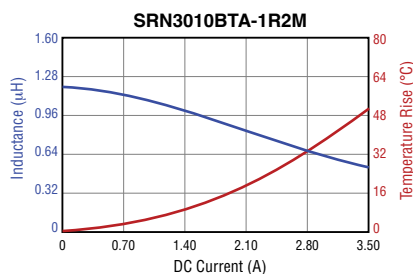
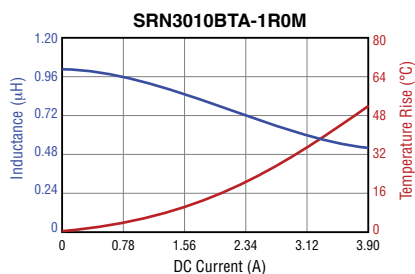
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Soldering Profile



Profile Feature	Pb Free Assembly
Preheat <ul style="list-style-type: none"> - 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)	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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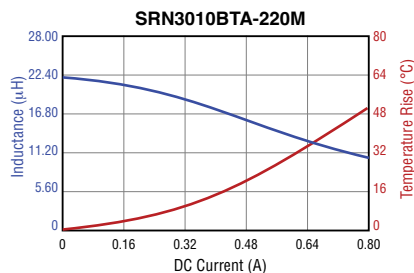
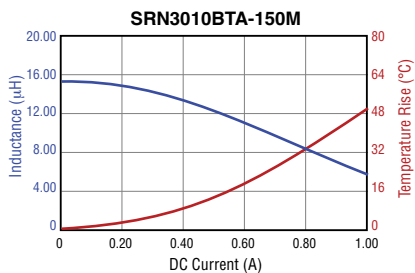
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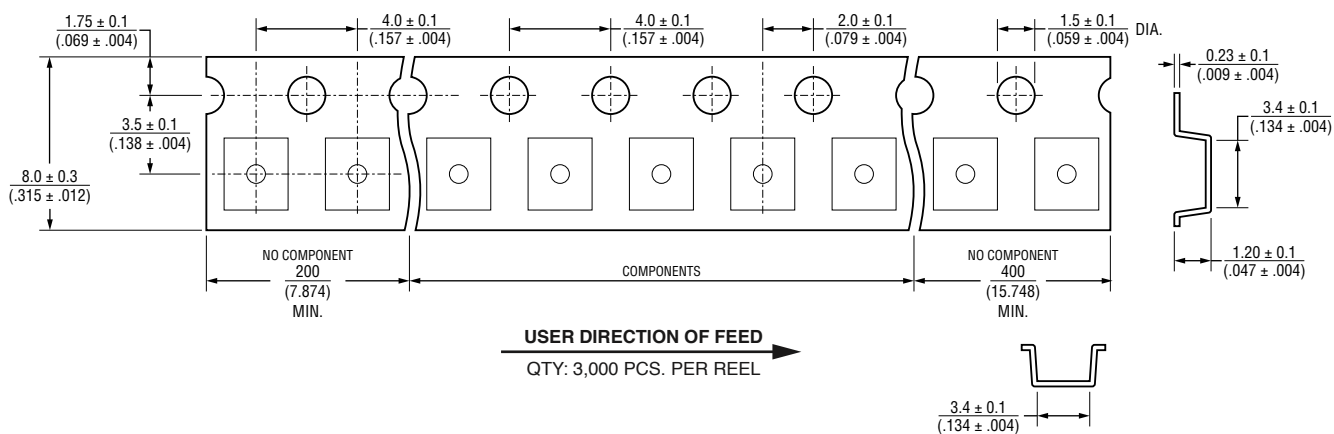
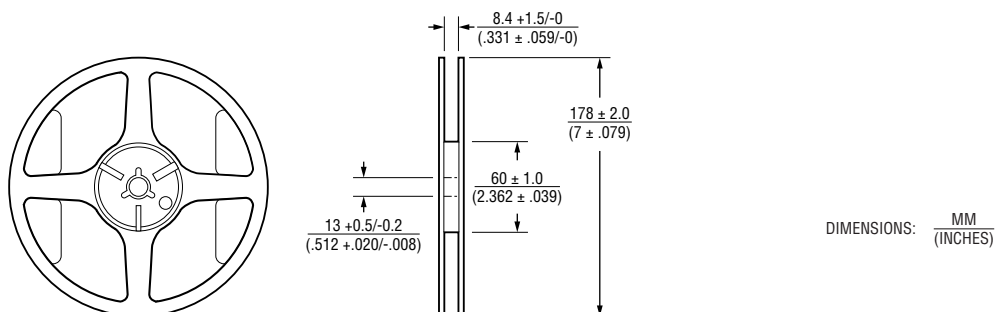
SRN3010BTA Series – Semi-shielded Power Inductors

BOURNS®

L vs. I Charts (continued)



Packaging Specifications



BOURNS®

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REV. 08/23

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