



Features

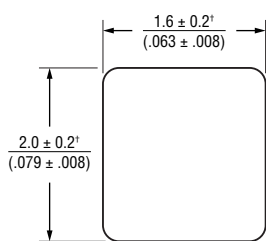
- Semi-shielded construction
- 1 mm max. profile
- Enhanced product reliability with soldered lead-wire
- AEC-Q200 compliant
- RoHS compliant* and halogen free**

SRN2010BTA Series – Semi-shielded Power Inductors

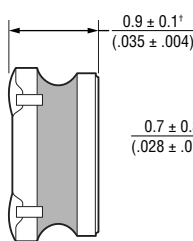
Electrical Specifications @ 25 °C

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. %						
SRN2010BTA-R24M	0.24	±20	10	270	20	24	5.20	4.10
SRN2010BTA-R33M	0.33	±20	10	250	29	34.8	4.60	3.30
SRN2010BTA-R47M	0.47	±20	10	240	37	45	4.00	2.90
SRN2010BTA-R68M	0.68	±20	10	180	50	60	3.60	2.50
SRN2010BTA-1R0M	1.00	±20	10	130	67	80.4	3.10	2.00
SRN2010BTA-1R5M	1.50	±20	10	95	98	118	2.50	1.60
SRN2010BTA-2R2M	2.20	±20	10	76	140	168	2.10	1.30
SRN2010BTA-3R3M	3.30	±20	10	64	210	252	1.70	1.10
SRN2010BTA-4R7M	4.70	±20	10	42	395	474	1.30	0.90
SRN2010BTA-5R6M	5.60	±20	10	40	415	498	1.10	0.85
SRN2010BTA-6R8M	6.80	±20	10	37	480	576	0.90	0.80
SRN2010BTA-8R2M	8.20	±20	10	33	630	756	0.80	0.70
SRN2010BTA-100M	10.0	±20	10	28	700	840	0.72	0.62
SRN2010BTA-150M	15.0	±20	10	24	1200	1440	0.60	0.46
SRN2010BTA-180M	18.0	±20	10	23	1650	1980	0.55	0.42
SRN2010BTA-220M	22.0	±20	10	22	1800	2160	0.50	0.38

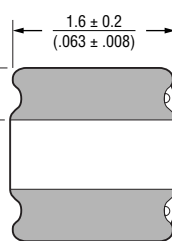
Product Dimensions



TOP VIEW



SIDE VIEW

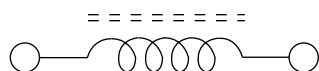


BOTTOM VIEW

† 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

SRN2010BTA - R24M

Model _____
Value Code (see table) _____

Additional Information

Click these links for more information:



[PRODUCT SELECTOR](#) [TECHNICAL LIBRARY](#) [INVENTORY](#) [SAMPLES](#) [CONTACT](#)

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 Rise40 °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

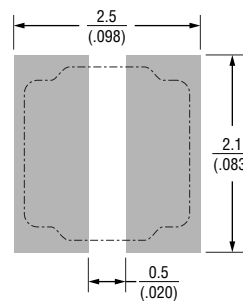
Wire..... Enameled copper

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

Coating..... Magnetic resin

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

Recommended Layout



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



WARNING Cancer and Reproductive Harm

www.P65Warnings.ca.gov

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

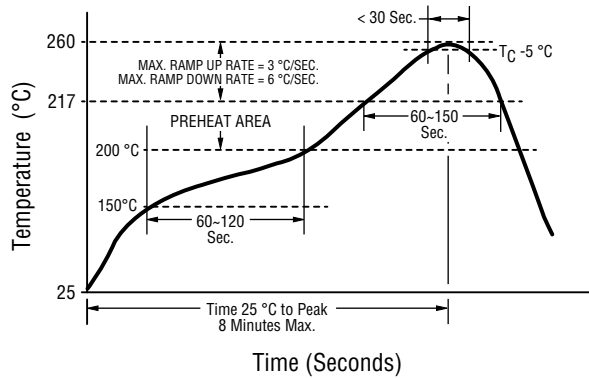
** Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.

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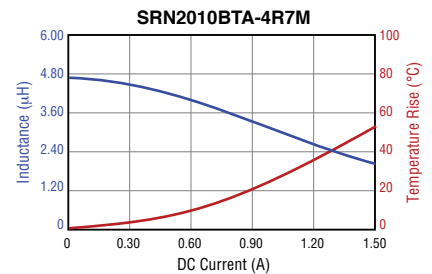
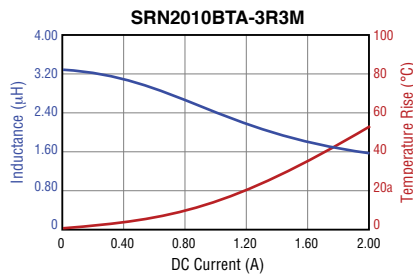
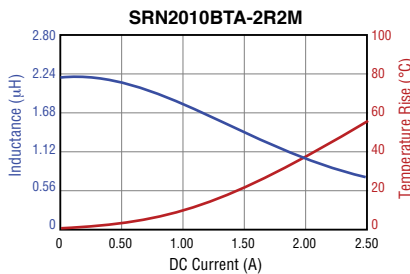
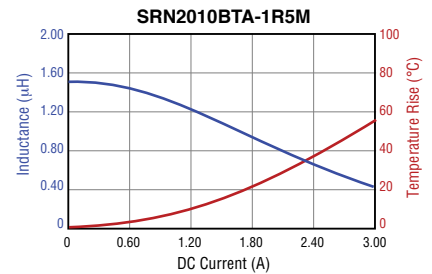
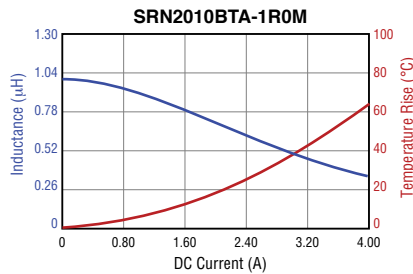
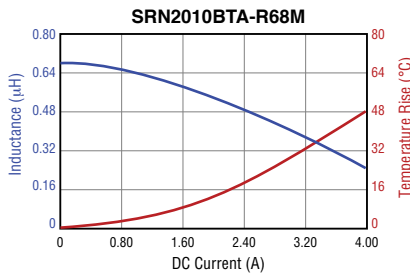
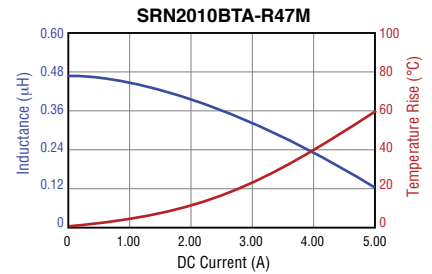
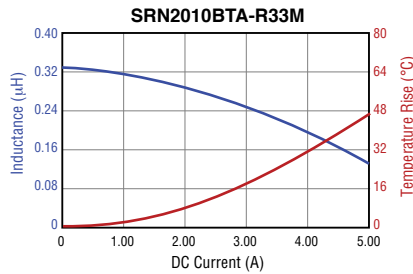
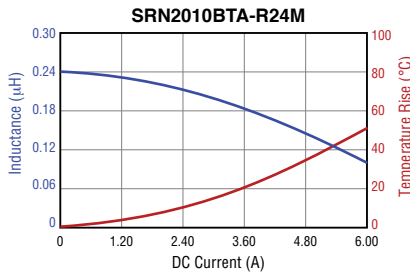
Soldering Profile



REFLOW TIMES: 3 TIMES MAX.

Profile Feature	Pb Free Assembly
Preheat - 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.
Liquidus 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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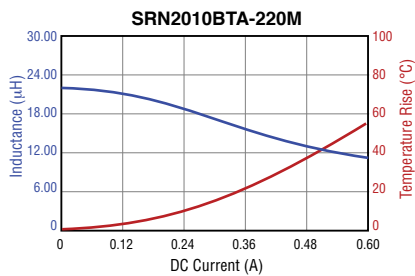
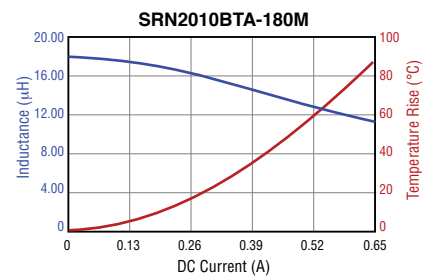
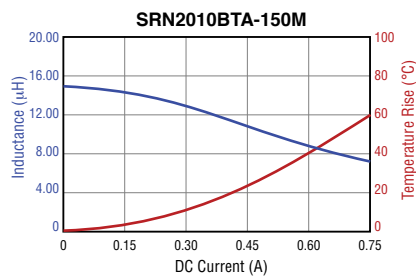
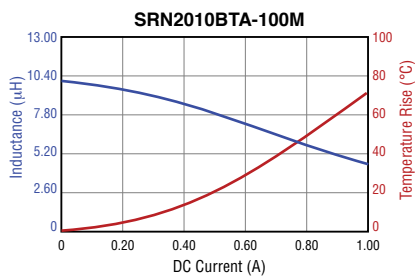
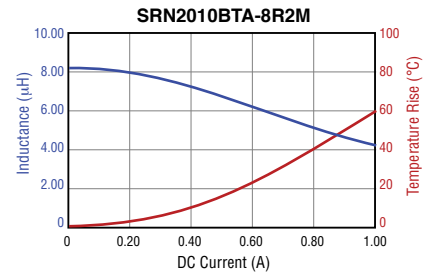
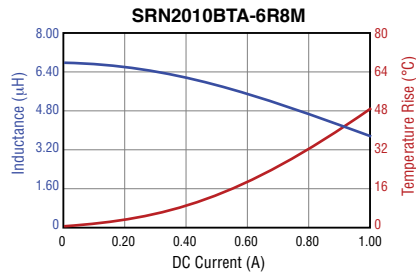
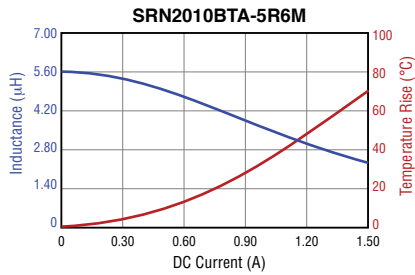
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L vs. I Charts (continued)



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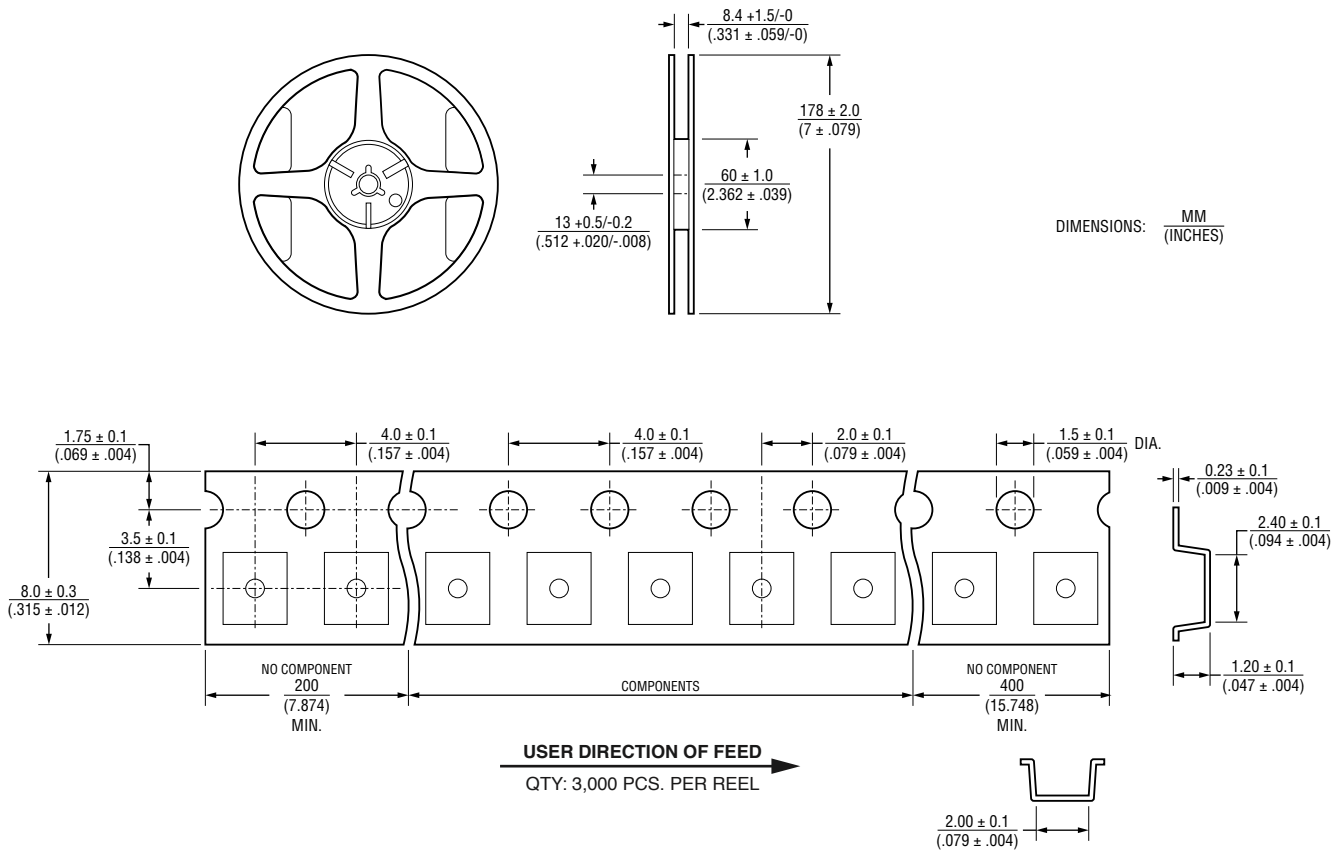
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Packaging Specifications



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