Features

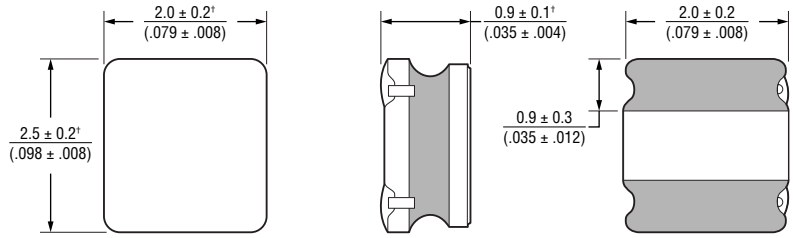
- Semi-shielded construction
- 1 mm max. profile
- Enhanced product reliability with soldered lead-wire
- AEC-Q200 compliant
- RoHS compliant* and halogen free**

SRN2510BTA 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. %						
SRN2510BTA-R47M	0.47	20	15	180	29	35	3.0	3.3
SRN2510BTA-R68M	0.68	20	15	145	39	47	2.8	2.8
SRN2510BTA-1R0M	1.0	20	15	110	60	72	2.6	2.5
SRN2510BTA-1R5M	1.5	20	10	85	80	96	2.4	2.1
SRN2510BTA-2R2M	2.2	20	10	72	110	132	2.0	1.5
SRN2510BTA-3R3M	3.3	20	10	53	170	204	1.7	1.3
SRN2510BTA-4R7M	4.7	20	10	45	250	300	1.4	1.2
SRN2510BTA-6R8M	6.8	20	10	36	370	444	1.2	0.95
SRN2510BTA-100M	10	20	10	30	460	552	1.0	0.75
SRN2510BTA-150M	15	20	10	20	770	924	0.8	0.62

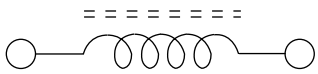
Product Dimensions



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

DIMENSIONS: MM (INCHES)

Electrical Schematic



How to Order

SRN2510BTA - R47M

Model

Value Code (see table)

Additional Information

Click these links for more information:

PRODUCT SELECTOR | TECHNICAL LIBRARY | INVENTORY | SAMPLES | CONTACT

General Specifications

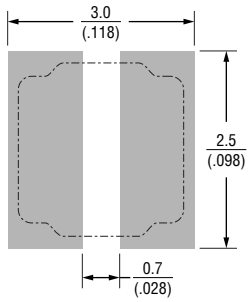
Operating Temperature
..... -55 °C to +125 °C
(Temperature rise included)
Storage Temperature
(Component on board)
..... -55 °C to +125 °C
(In tape and reel package)
..... -10 °C to +40 °C, 50-60 % RH
Temperature Rise .....40 °C at rated I_{rms}[1]
Rated Current
..... Inductance drops 30 % at I_{sat}
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

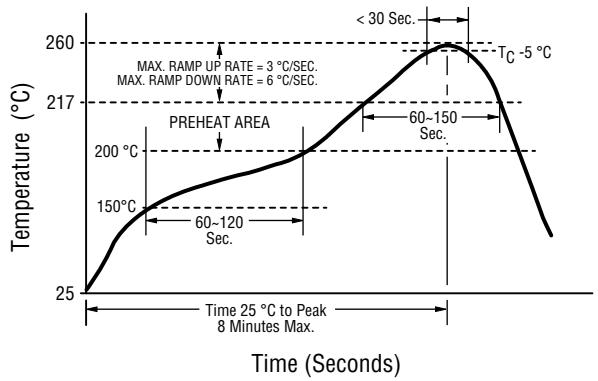


DIMENSIONS: MM (INCHES)

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.

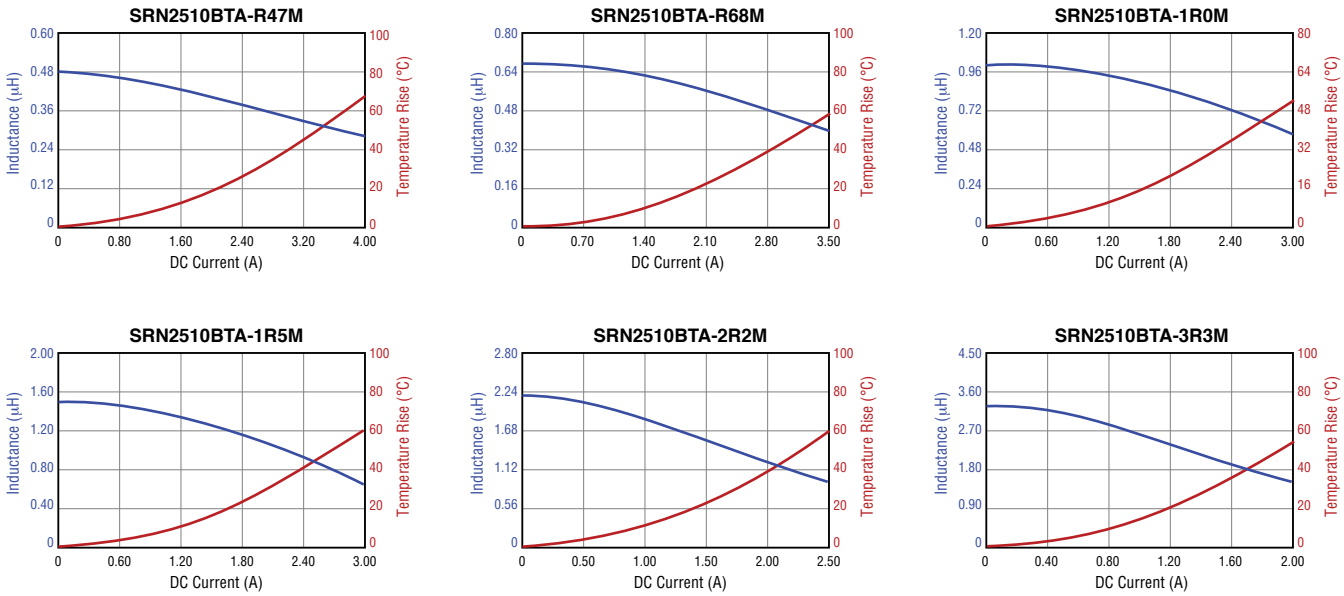
Soldering Profile



REFLOW TIMES: 3 TIMES MAX.

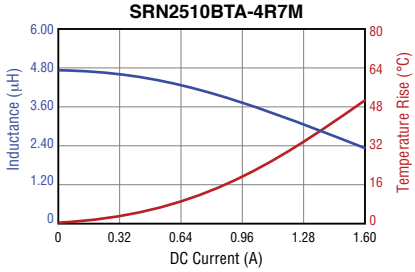
Profile Feature	Pb Free Assembly
Preheat - Temperature Min. (T_{smin}) - Temperature Max. (T_{smax}) - Time(t_s) from T_{smin} to T_{smax}	 150 °C 200 °C 60-120 seconds
Ramp-up Rate (T_L to T_p)	3 °C/second max.
Liquidous temperature (T_L) Time (t_L) maintained above T_L	217 °C 60-150 seconds
Peak package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

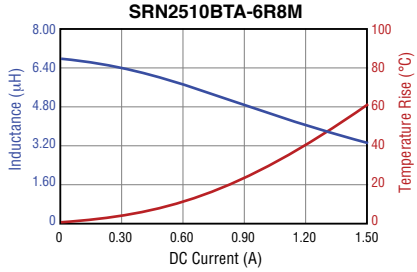


L vs. I Charts (continued)

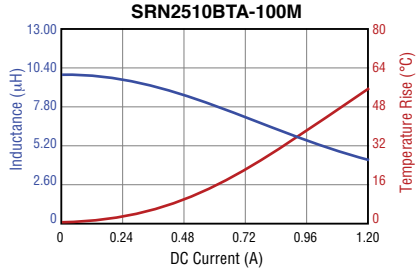
SRN2510BTA-4R7M



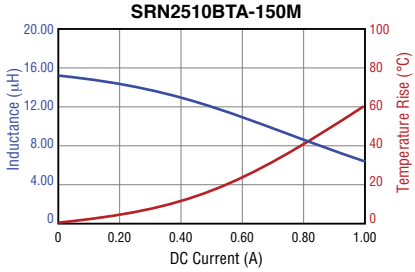
SRN2510BTA-6R8M



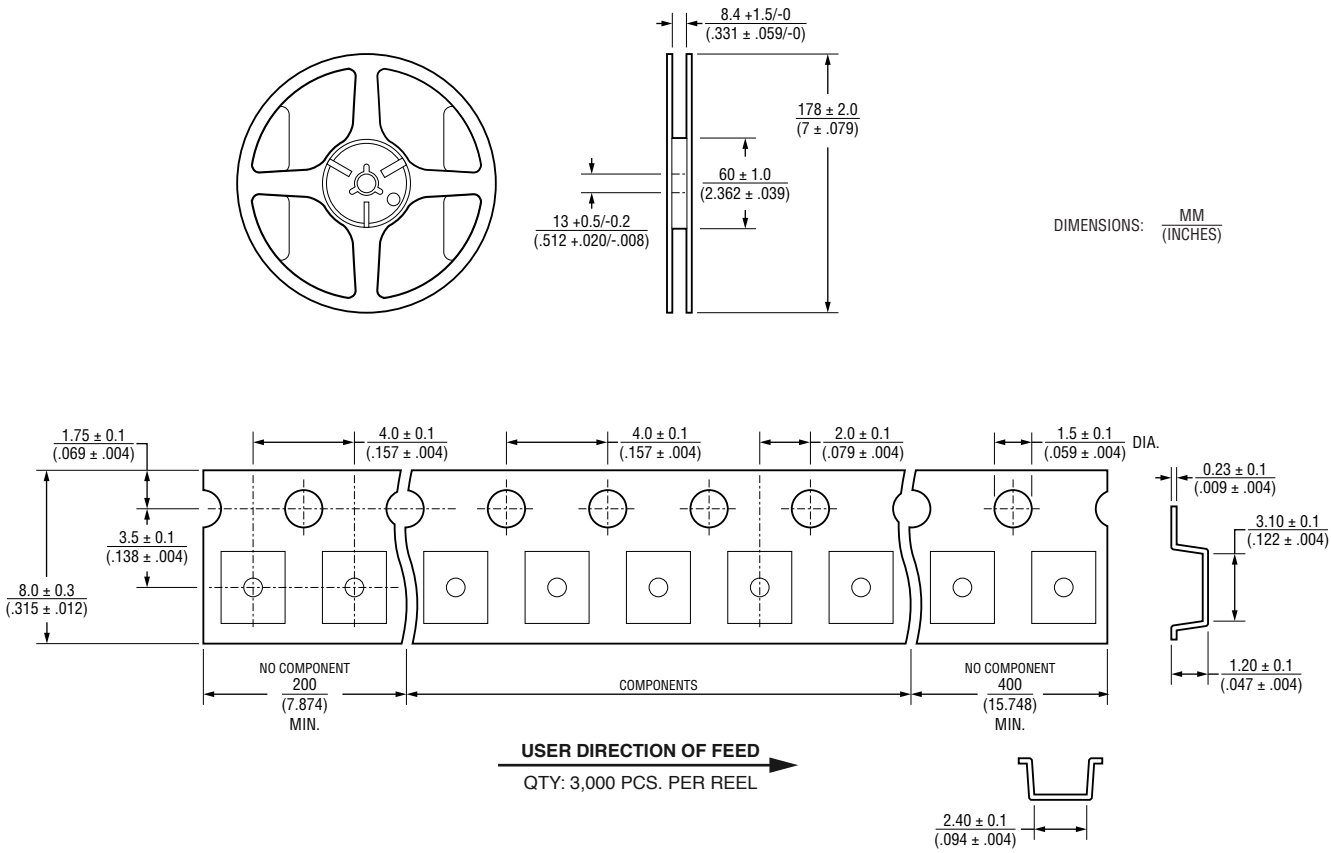
SRN2510BTA-100M



SRN2510BTA-150M



Packaging Specifications



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REV. 08/23

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