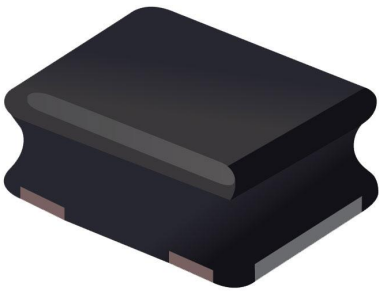


# SRN2510BTA-R47M Datasheet

www.digi-electronics.com



<https://www.DiGi-Electronics.com>

DiGi Electronics Part Number	SRN2510BTA-R47M-DG
Manufacturer	<a href="#">Bourns Inc.</a>
Manufacturer Product Number	SRN2510BTA-R47M
Description	FIXED IND 470NH 3A 0.035OHM SMD
Detailed Description	470 nH Semi-Shielded Drum Core, Wirewound Inductor 3 A 35mOhm Max 1008 (2520 Metric)



Tel: +00 852-30501935

RFQ Email: [Info@DiGi-Electronics.com](mailto:Info@DiGi-Electronics.com)

DiGi is a global authorized distributor of electronic components.

## Purchase and inquiry

Manufacturer Product Number:

SRN2510BTA-R47M

Series:

SRN2510BTA

Type:

Drum Core, Wirewound

Inductance:

470 nH

Current Rating (Amps):

3 A

Shielding:

Semi-Shielded

Q @ Freq:

15 @ 1MHz

Ratings:

AEC-Q200

Inductance Frequency - Test:

100 kHz

Mounting Type:

Surface Mount

Supplier Device Package:

2510

Height - Seated (Max):

0.039" (1.00mm)

Manufacturer:

Bourns Inc.

Product Status:

Active

Material - Core:

Ferrite

Tolerance:

±20%

Current - Saturation (Isat):

3.3A

DC Resistance (DCR):

35mOhm Max

Frequency - Self Resonant:

180MHz

Operating Temperature:

-55°C ~ 125°C

Features:

-

Package / Case:

1008 (2520 Metric)

Size / Dimension:

0.098" L x 0.079" W (2.50mm x 2.00mm)

Base Product Number:

SRN2510BTA

## Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8504.50.8000

Moisture Sensitivity Level (MSL):

1 (Unlimited)

ECCN:

EAR99





**Features**

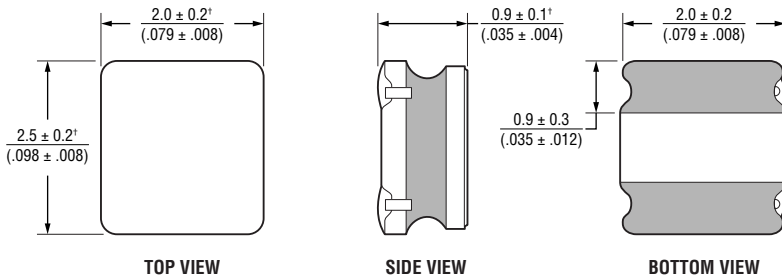
- Semi-shielded construction
- 1 mm max. profile
- Enhanced product reliability with soldered lead-wire
- AEC-Q200 compliant
- RoHS compliant\* and halogen free\*\*

**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 <sub>rms</sub> (A) Typ.	I <sub>sat</sub> (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

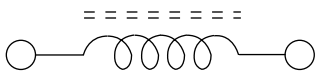
**Product Dimensions**



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

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

**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<sub>rms</sub> 1 Rated Current  
..... Inductance drops 30 % at I<sub>sat</sub>

Moisture Sensitivity Level ..... 1

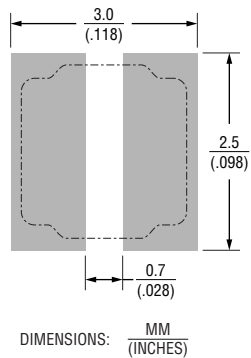
ESD Classification (HBM) ..... N/A

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**

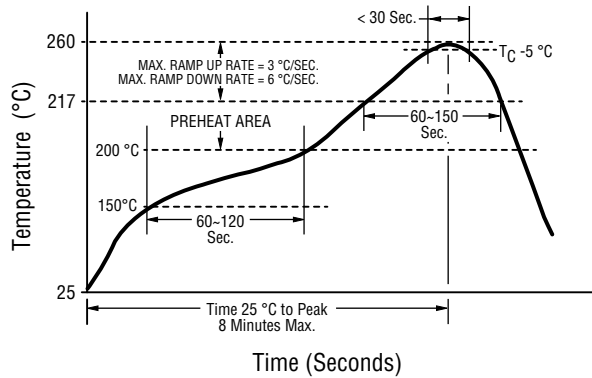


**WARNING Cancer and Reproductive Harm**  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

\* 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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**SRN2510BTA Series – Semi-shielded Power Inductors** **BOURNS®**

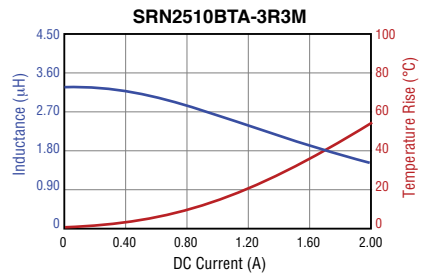
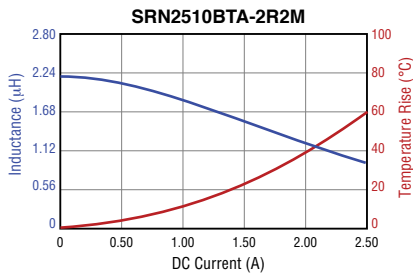
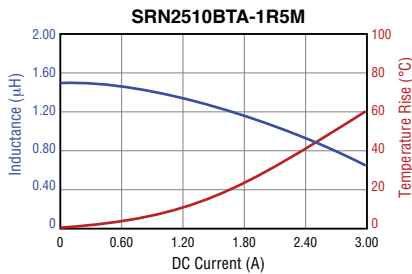
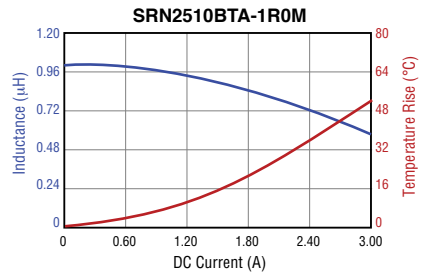
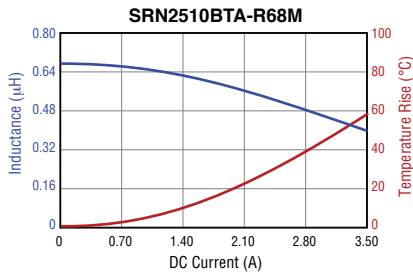
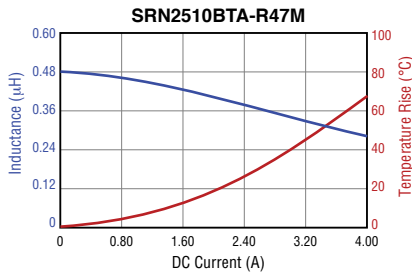
**Soldering Profile**



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.

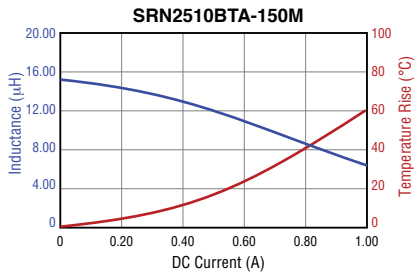
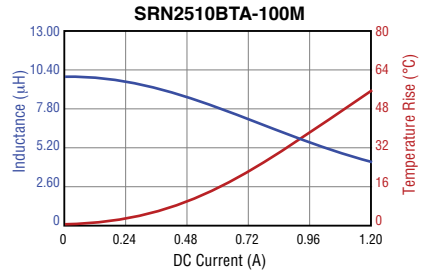
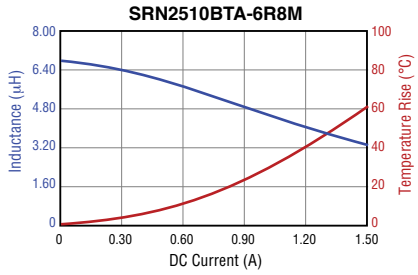
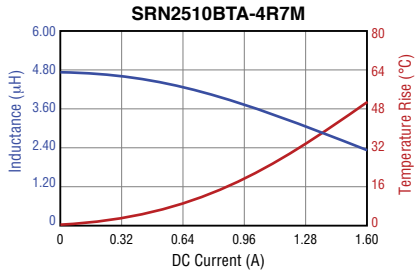
**L vs. I Charts**



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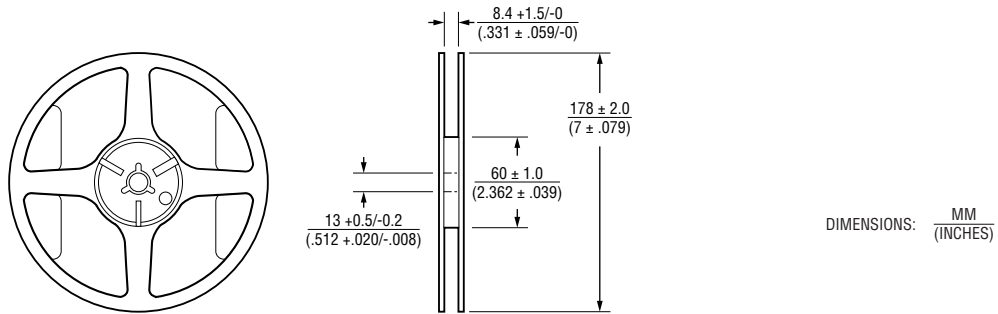
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**L vs. I Charts (continued)**

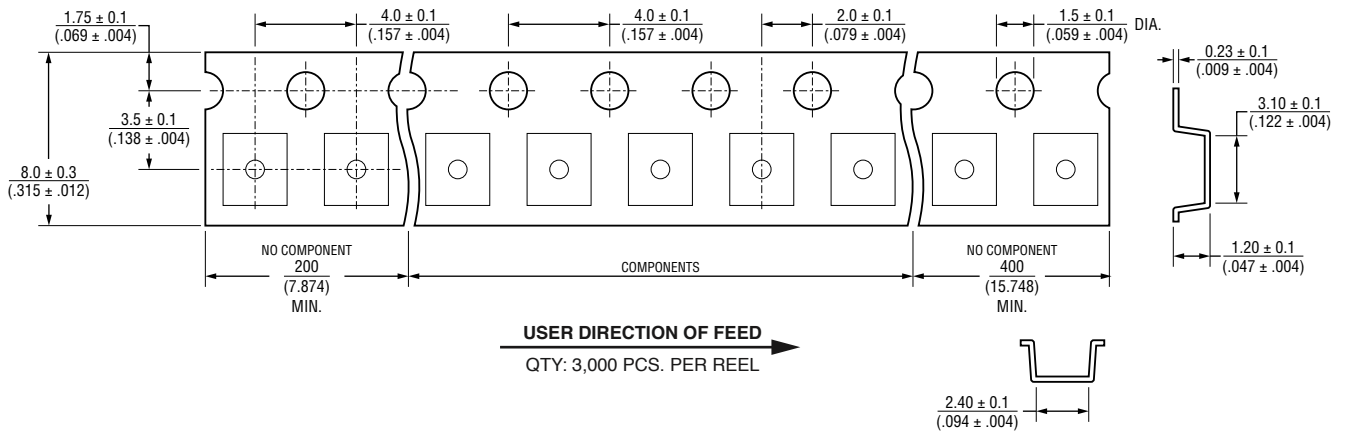


**SRN2510BTA Series – Semi-shielded Power Inductors** **BOURNS®**

**Packaging Specifications**



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



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