



## Features

- Semi-shielded construction
- Inductance range: 0.5 to 330  $\mu$ H
- Rated current up to 12 A
- AEC-Q200 qualified
- RoHS compliant\* and halogen free\*\*

## Applications

- Automotive systems:
  - Driver assistant
  - Infotainment
  - Lighting
- DC/DC converters
- Power supplies
- Digital video cameras
- HDDs
- Smartphones
- Televisions, LCD displays

# SRN8040TA Series - Semi-shielded Power Inductors

## Electrical Specifications @ 25 °C

Bourns Part No.	Inductance @ 1 MHz / 1 V		Q (Min.) @ 1 MHz	SRF (MHz) Typ.	DCR (m $\Omega$ ) $\pm$ 20 %	I <sub>rms</sub> (A) Max.	I <sub>sat</sub> (A) Max.
	L ( $\mu$ H)	Tol. %					
SRN8040TA-R50Y	0.5	$\pm$ 30	20	165	5.5	12.00	17.00
SRN8040TA-1R0Y	1.0	$\pm$ 30	15	85	8.2	8.50	13.80
SRN8040TA-1R4Y	1.4	$\pm$ 30	15	78	10	8.20	11.80
SRN8040TA-1R5Y	1.5	$\pm$ 30	15	66	10	8.00	11.50
SRN8040TA-2R2Y	2.2	$\pm$ 30	15	57	11.5	7.40	9.80
SRN8040TA-3R3Y	3.3	$\pm$ 30	15	48	15	6.60	8.00
SRN8040TA-4R7M	4.7	$\pm$ 20	15	38	19.5	5.80	6.70
SRN8040TA-5R6M	5.6	$\pm$ 20	15	33	22	5.40	6.20
SRN8040TA-6R8M	6.8	$\pm$ 20	15	29	25	5.10	5.60
SRN8040TA-100M	10	$\pm$ 20	15	25	33	4.60	5.00
SRN8040TA-150M	15	$\pm$ 20	12	20	50	3.60	4.00
SRN8040TA-220M	22	$\pm$ 20	12	18	73	2.90	3.10
SRN8040TA-330M	33	$\pm$ 20	12	15	100	2.30	2.60
SRN8040TA-470M	47	$\pm$ 20	12	12	135	2.00	2.20
SRN8040TA-560M	56	$\pm$ 20	12	10.5	160	1.75	1.90
SRN8040TA-680M	68	$\pm$ 20	12	9.5	205	1.65	1.75
SRN8040TA-820M	82	$\pm$ 20	12	8.5	230	1.40	1.60
SRN8040TA-101M	100	$\pm$ 20	10	8	300	1.20	1.45
SRN8040TA-121M	120	$\pm$ 20	10	7.5	350	1.10	1.30
SRN8040TA-151M	150	$\pm$ 20	10	7	410	0.98	1.20
SRN8040TA-181M	180	$\pm$ 20	10	6.5	490	0.91	1.04
SRN8040TA-221M	220	$\pm$ 20	10	5.5	610	0.85	0.99
SRN8040TA-331M	330	$\pm$ 20	10	5	850	0.70	0.75

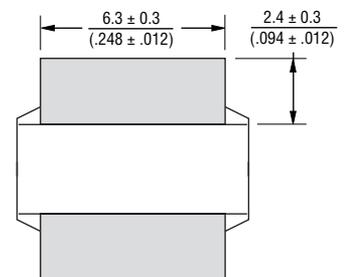
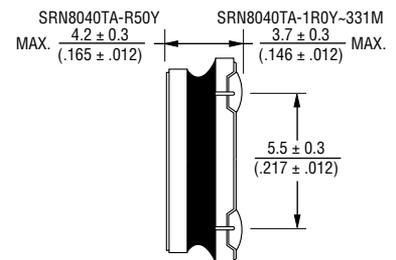
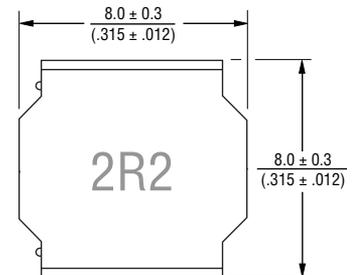
## General Specifications

Operating Temp. .... -55 °C to +125 °C  
 (Temperature rise included)  
 Storage Temperature .. -55 °C to +125 °C  
 Temperature Rise ..... 40 °C at rated I<sub>rms</sub>  
 Rated Current  
 ..... Inductance drops 30 % at I<sub>sat</sub>  
 Failure In Time (FIT) ..... 24.7/10<sup>9</sup> hours  
 Mean Time Between Failures (MTBF)  
 ..... 40.4 x 10<sup>6</sup> hours

## Materials

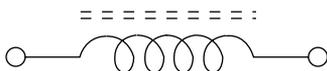
Core ..... Ferrite  
 Wire ..... Enameled copper  
 Terminal Finish ..... Sn  
 Coating ..... Magnetic epoxy resin  
 Packaging ..... 1000 pcs. per 13-inch reel

## Product Dimensions

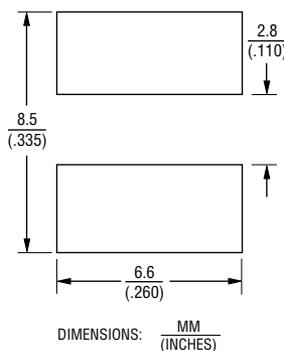


DIMENSIONS:  $\frac{\text{MM}}{\text{(INCHES)}}$

## Electrical Schematic



## Recommended Layout



## How to Order

**SRN8040TA - 100M**

Model \_\_\_\_\_  
 Value Code (see table) \_\_\_\_\_

\*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.

\*\*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.

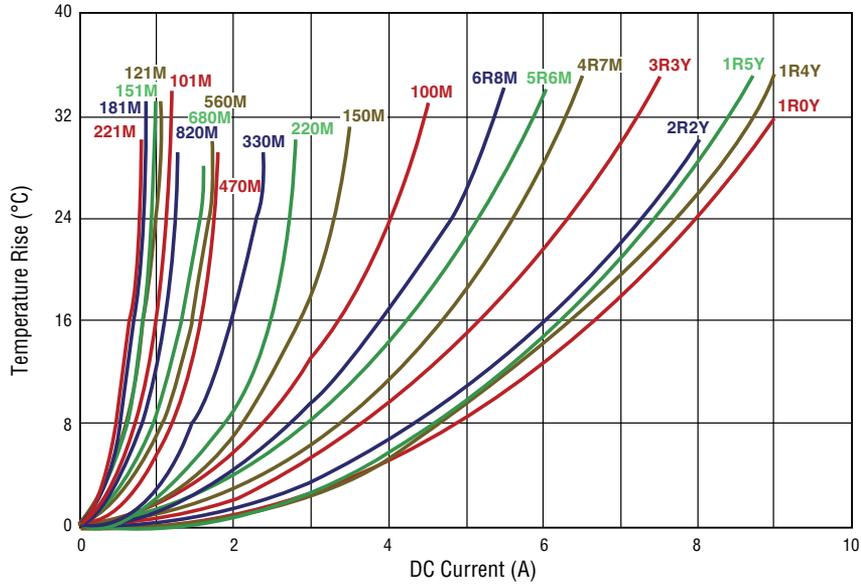
The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.

Users should verify actual device performance in their specific applications.

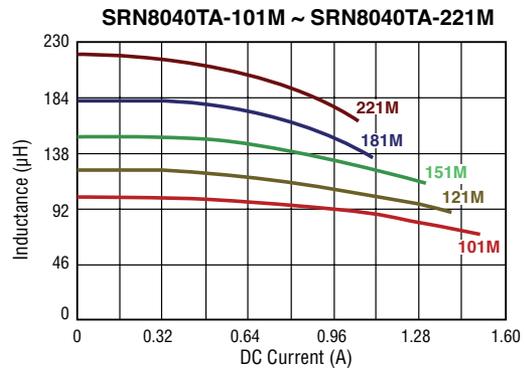
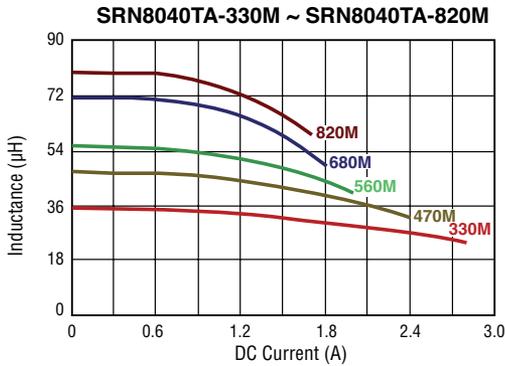
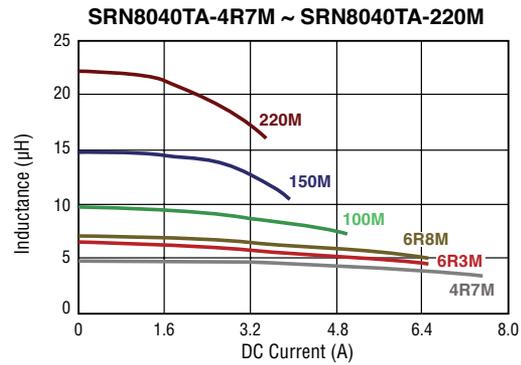
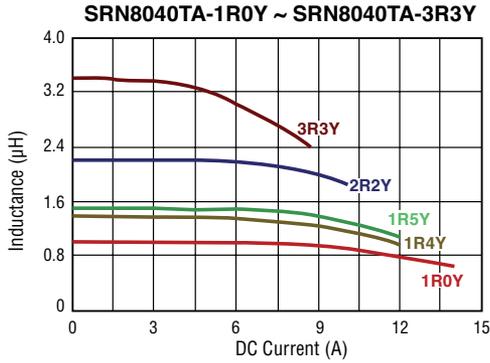
# SRN8040TA Series - Semi-shielded Power Inductors



## Temperature Rise vs. Current



## Inductance vs. Current

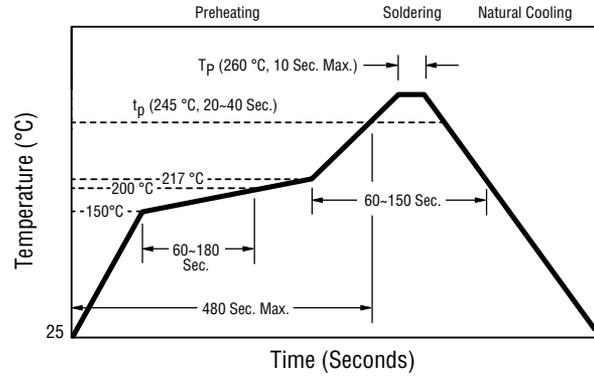


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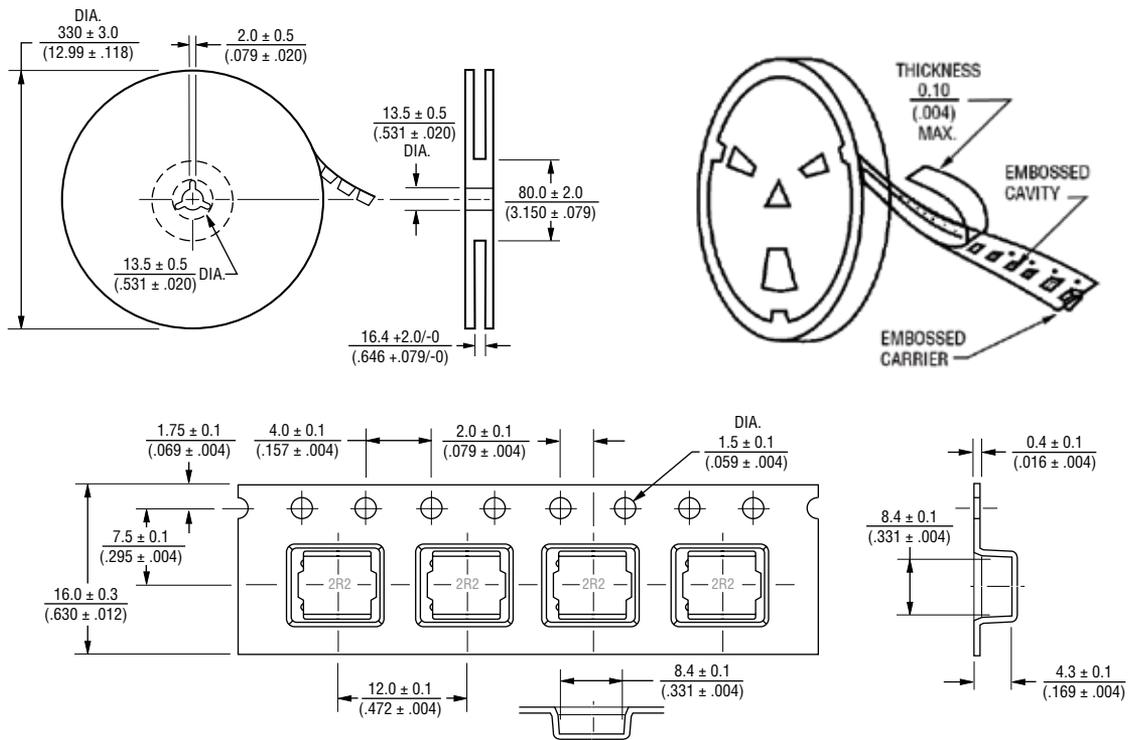
# SRN8040TA Series - Semi-shielded Power Inductors

**BOURNS®**

## Soldering Profile



## Packaging Specifications



USER DIRECTION OF FEED  
QTY: 1000 PCS. PER REEL

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

07/16

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# Mouser Electronics

Authorized Distributor

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## Bourns:

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