



**THE DATASHEET OF  
SRN8040TA-1R4Y**





## Features

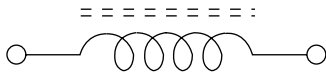
- Semi-shielded construction
- Inductance range: 0.5 to 330  $\mu$ H
- Rated current up to 12 A
- AEC-Q200 compliant
- RoHS compliant\* and halogen free\*\*

## 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) Typ. | I <sub>sat</sub> (A) Typ. |
|-----------------|--------------------------|----------|------------------|----------------|------------------------------|---------------------------|---------------------------|
|                 | 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-2R0Y  | 2.0                      | $\pm$ 30 | 15               | 61             | 11                           | 7.50                      | 10.20                     |
| 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                      |

### Electrical Schematic

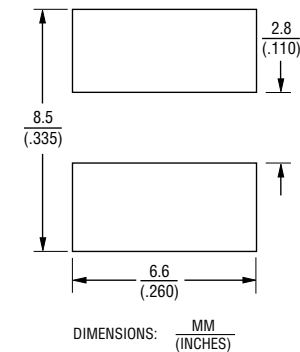


### How to Order

**SRN8040TA - 100M**

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

### Recommended Layout



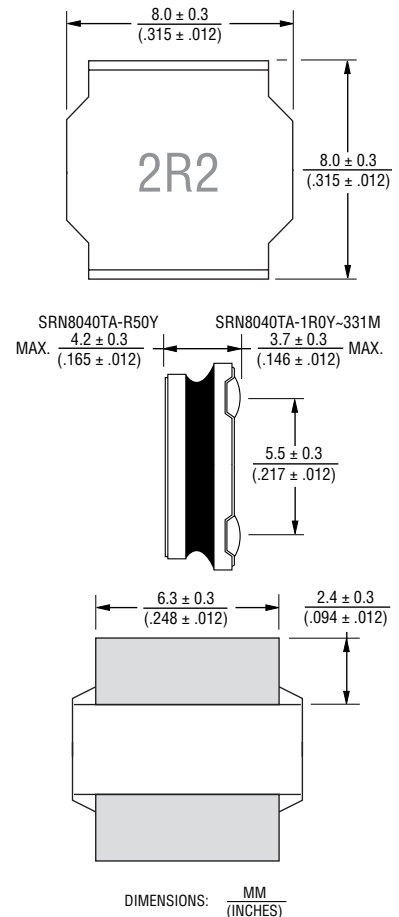
### General Specifications

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  
Moisture Sensitivity Level ..... 1  
ESD Classification (HBM) ..... N/A

### Materials

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

### Product Dimensions



**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.

Specifications are subject to change without notice.

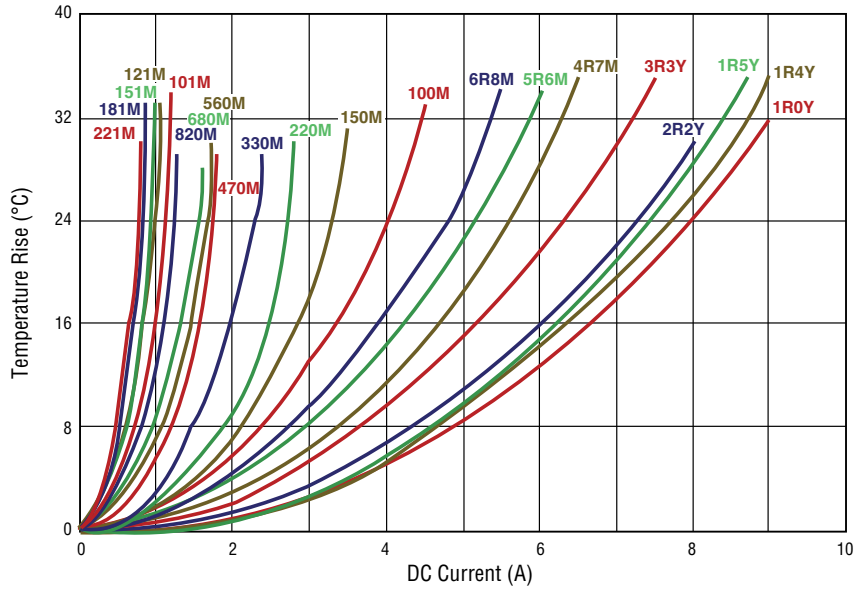
Users should verify actual device performance in their specific applications.

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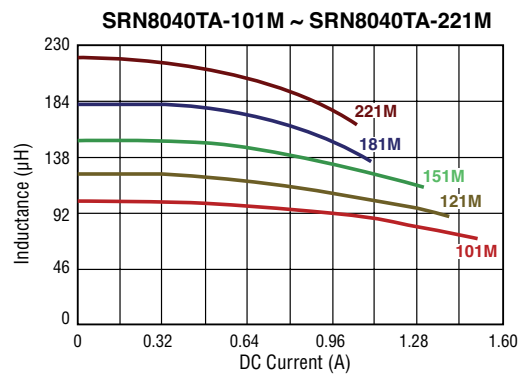
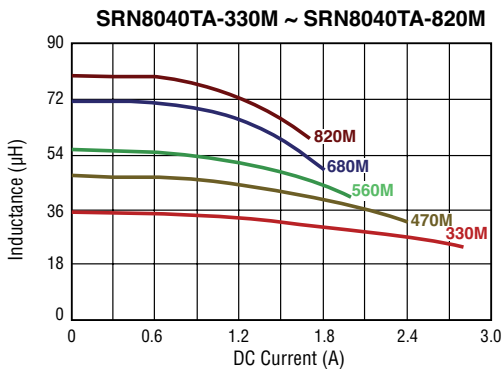
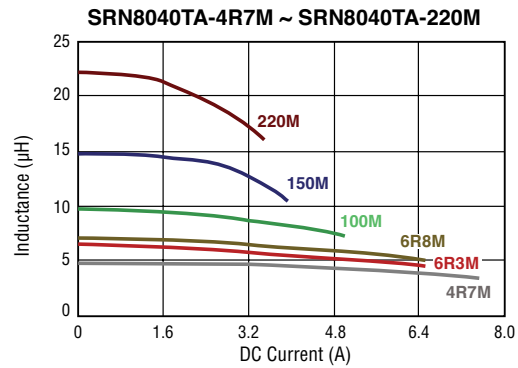
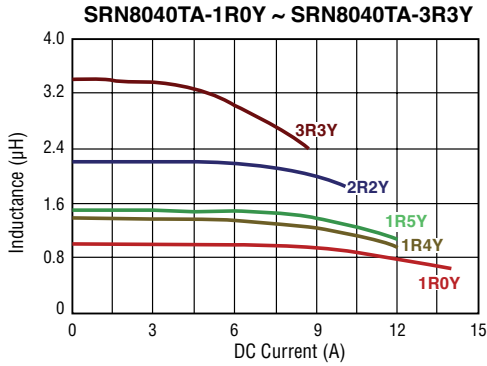
# SRN8040TA Series - Semi-shielded Power Inductors



## Temperature Rise vs. Current



## Inductance vs. Current



Specifications are subject to change without notice.

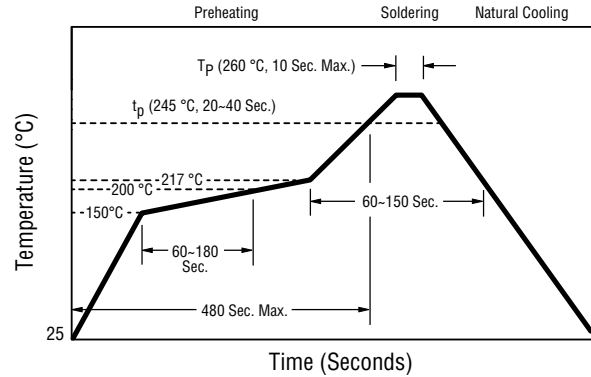
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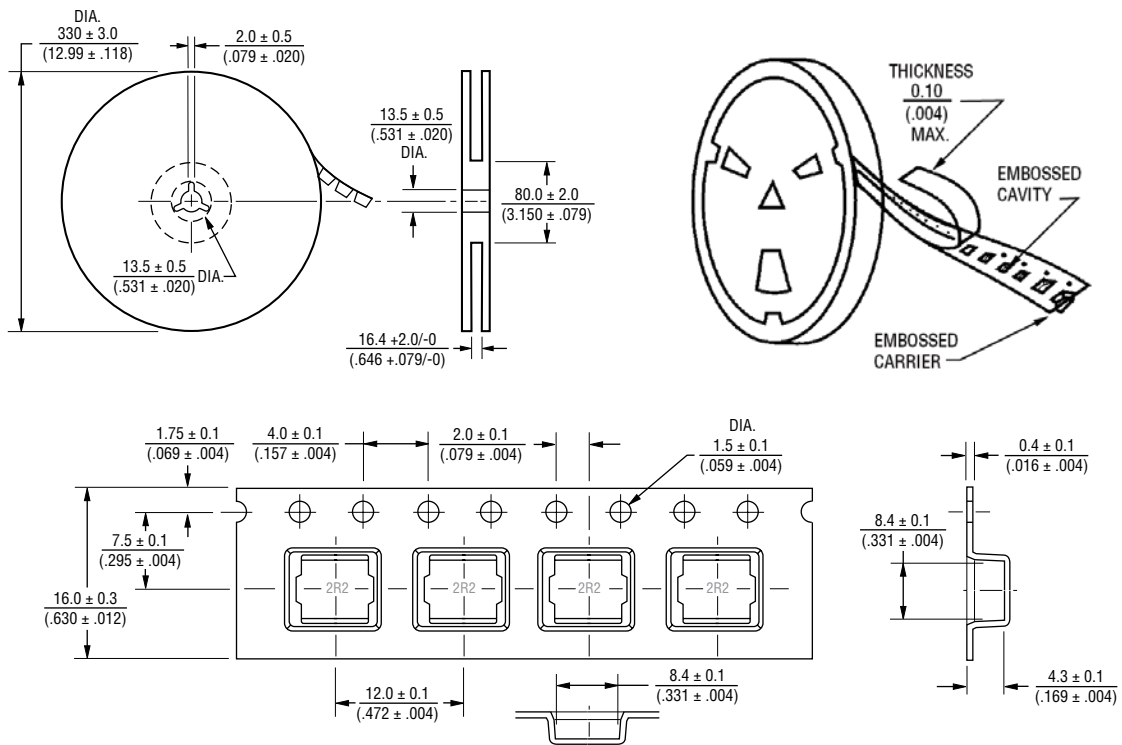
# SRN8040TA Series - Semi-shielded Power Inductors

**BOURNS®**

## Soldering Profile



## Packaging Specifications



USER DIRECTION OF FEED →  
QTY: 1000 PCS. PER REEL

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

REV. 06/19

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