



## Features

- Semi-shielded construction
- Inductance range: 1 to 470  $\mu$ H
- Rated current up to 8 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

# SRN6045TA 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. %   |                  |                |                              |                           |                           |
| SRN6045TA-1R0Y  | 1.0                      | $\pm$ 30 | 15               | 110            | 10                           | 8.00                      | 13.50                     |
| SRN6045TA-1R2Y  | 1.2                      | $\pm$ 30 | 15               | 90             | 10.5                         | 7.50                      | 12.5                      |
| SRN6045TA-1R5Y  | 1.5                      | $\pm$ 30 | 15               | 75             | 11.7                         | 7.00                      | 12.0                      |
| SRN6045TA-2R2Y  | 2.2                      | $\pm$ 30 | 15               | 55             | 15                           | 6.00                      | 9.50                      |
| SRN6045TA-3R3Y  | 3.3                      | $\pm$ 30 | 15               | 45             | 21                           | 5.00                      | 7.80                      |
| SRN6045TA-4R7M  | 4.7                      | $\pm$ 20 | 15               | 40             | 26                           | 4.50                      | 6.80                      |
| SRN6045TA-6R3M  | 6.3                      | $\pm$ 20 | 15               | 35             | 33                           | 3.80                      | 5.90                      |
| SRN6045TA-6R8M  | 6.8                      | $\pm$ 20 | 15               | 30             | 34                           | 3.60                      | 5.70                      |
| SRN6045TA-8R2M  | 8.2                      | $\pm$ 20 | 15               | 27             | 46                           | 3.40                      | 5.10                      |
| SRN6045TA-100M  | 10                       | $\pm$ 20 | 15               | 25             | 52                           | 3.20                      | 4.60                      |
| SRN6045TA-120M  | 12                       | $\pm$ 20 | 15               | 22             | 65                           | 3.00                      | 4.00                      |
| SRN6045TA-150M  | 15                       | $\pm$ 20 | 15               | 20             | 71                           | 2.80                      | 3.80                      |
| SRN6045TA-220M  | 22                       | $\pm$ 20 | 15               | 17             | 96                           | 2.30                      | 3.30                      |
| SRN6045TA-330M  | 33                       | $\pm$ 20 | 15               | 13             | 145                          | 1.80                      | 2.50                      |
| SRN6045TA-470M  | 47                       | $\pm$ 20 | 15               | 12             | 200                          | 1.60                      | 2.00                      |
| SRN6045TA-560M  | 56                       | $\pm$ 20 | 15               | 11             | 230                          | 1.40                      | 1.80                      |
| SRN6045TA-680M  | 68                       | $\pm$ 20 | 15               | 10             | 305                          | 1.10                      | 1.60                      |
| SRN6045TA-820M  | 82                       | $\pm$ 20 | 15               | 9              | 365                          | 0.98                      | 1.50                      |
| SRN6045TA-101M  | 100                      | $\pm$ 20 | 15               | 8.5            | 456                          | 0.92                      | 1.33                      |
| SRN6045TA-121M  | 120                      | $\pm$ 20 | 15               | 7              | 500                          | 0.85                      | 1.20                      |
| SRN6045TA-151M  | 150                      | $\pm$ 20 | 15               | 6.5            | 626                          | 0.75                      | 1.10                      |
| SRN6045TA-181M  | 180                      | $\pm$ 20 | 15               | 6              | 745                          | 0.68                      | 1.00                      |
| SRN6045TA-221M  | 220                      | $\pm$ 20 | 15               | 5              | 900                          | 0.60                      | 0.88                      |
| SRN6045TA-331K  | 330                      | $\pm$ 10 | 15               | 4              | 1400                         | 0.55                      | 0.60                      |
| SRN6045TA-471K  | 470                      | $\pm$ 10 | 15               | 3              | 2050                         | 0.40                      | 0.50                      |

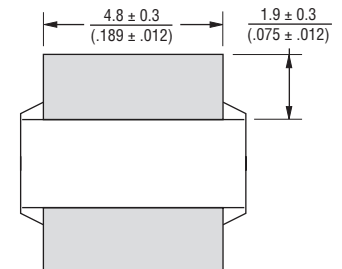
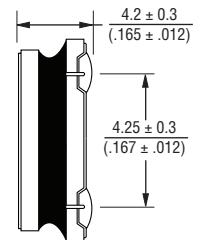
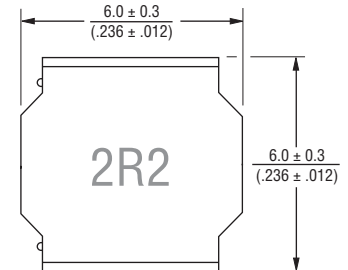
## General Specifications

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 ..... N/A

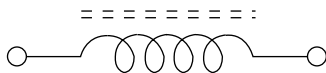
## Materials

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

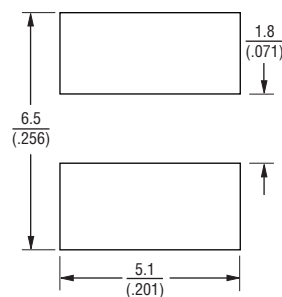
## Product Dimensions



## Electrical Schematic



## Recommended Layout



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

## How to Order

**SRN6045TA - 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.

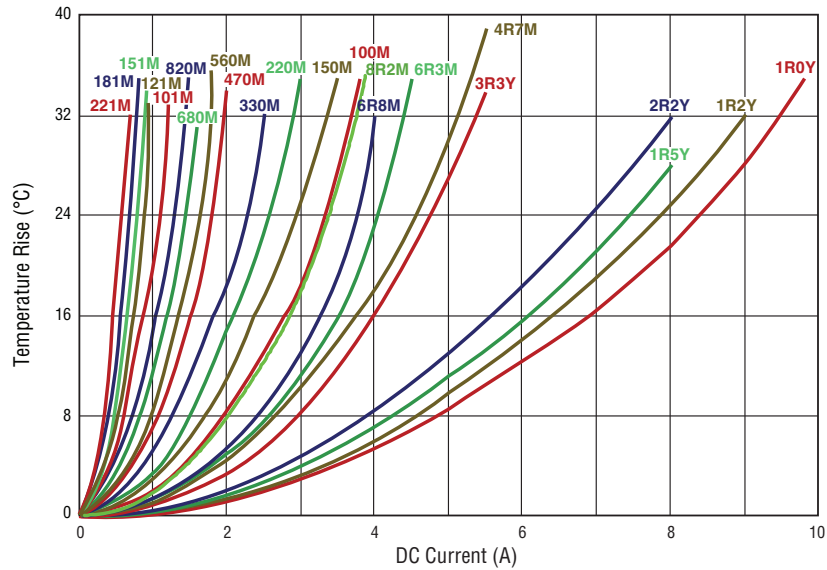
Users should verify actual device performance in their specific applications.

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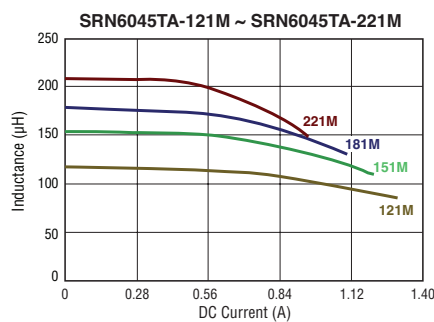
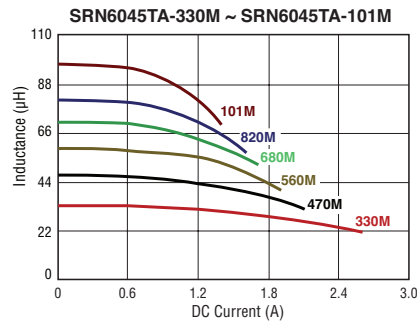
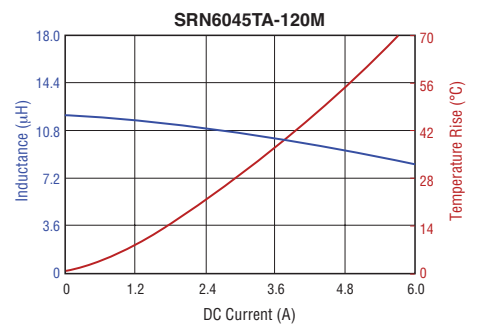
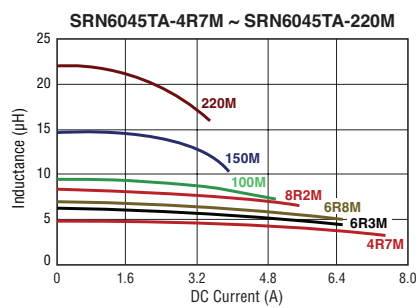
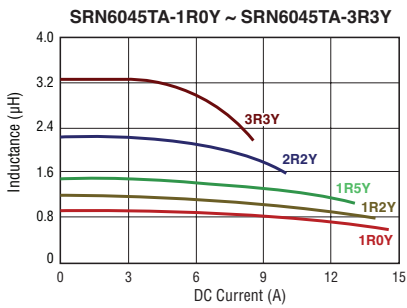
# SRN6045TA Series - Semi-shielded Power Inductors



## Temperature Rise vs. Current



## Inductance vs. Current



Specifications are subject to change without notice.

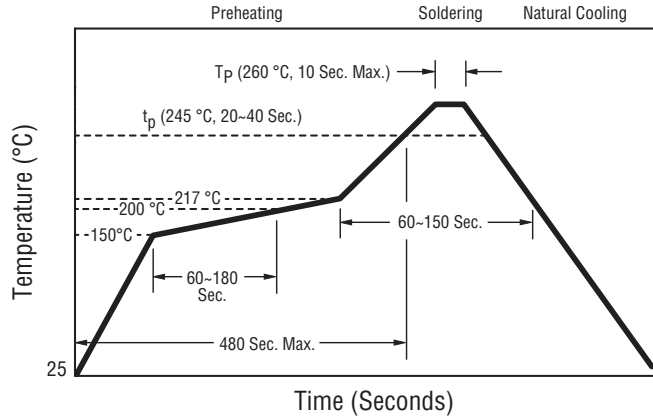
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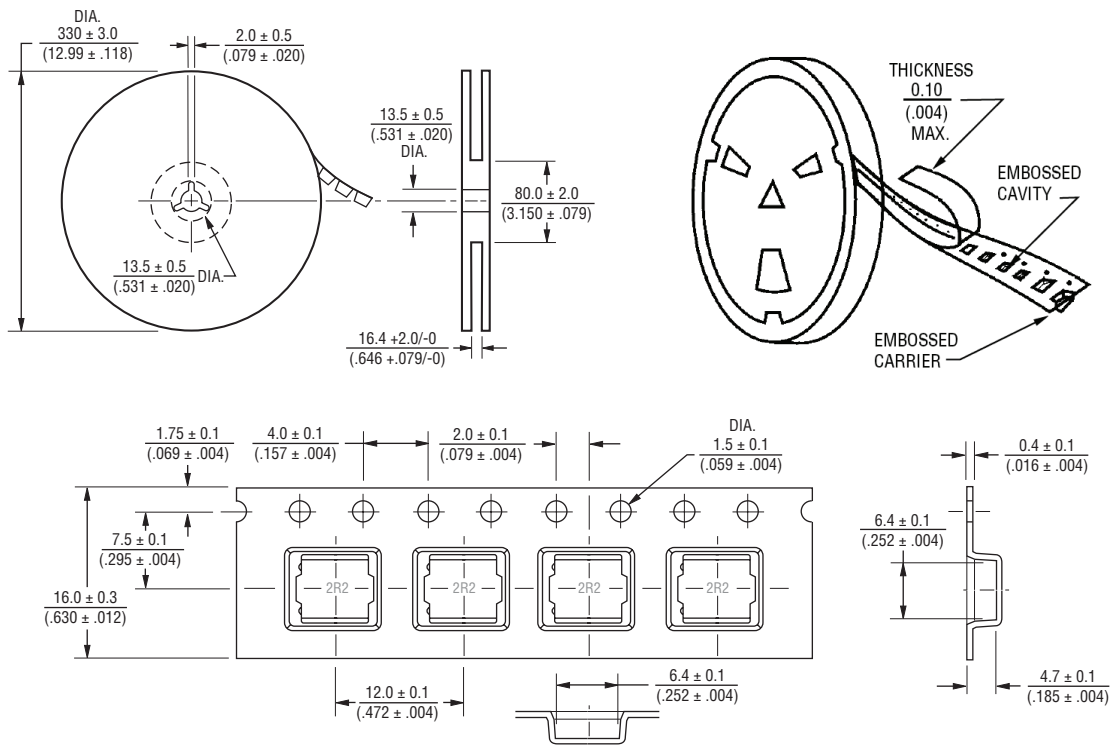
# SRN6045TA Series - Semi-shielded Power Inductors

**BOURNS®**

## Soldering Profile



## Packaging Specifications



USER DIRECTION OF FEED  
 QTY: 1000 PCS. PER REEL

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

REV. 10/17

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Users should verify actual device performance in their specific applications.

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