



## Features

- Semi-shielded construction
- Inductance range: 0.33 to 10  $\mu$ H
- Rated current up to 2.1 A
- Low profile: 0.95 mm max.
- RoHS compliant\* and halogen free\*\*

## Applications

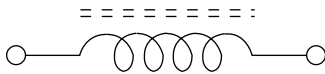
- DC/DC converters
- Power supplies
- Wearable devices
- HDDs, SSDs
- Smartphones
- LCD displays

# SRN2009T Series - Semi-shielded Power Inductors

### Electrical Specifications @ 25 °C

| Bourns Part No. | Inductance<br>@ 1 MHz / 0.1 V |          | Q<br>(Typ.)<br>@ 1 MHz | SRF<br>(MHz)<br>Typ. | DCR<br>( $\Omega$ )<br>$\pm 20$ % | I <sub>rms</sub><br>(A)<br>Typ. | I <sub>sat</sub><br>(A)<br>Typ. |
|-----------------|-------------------------------|----------|------------------------|----------------------|-----------------------------------|---------------------------------|---------------------------------|
|                 | L ( $\mu$ H)                  | Tol. %   |                        |                      |                                   |                                 |                                 |
| SRN2009T-R33M   | 0.33                          | $\pm 20$ | 30                     | 400                  | 0.028                             | 2.1                             | 2.1                             |
| SRN2009T-R47M   | 0.47                          | $\pm 20$ | 25                     | 300                  | 0.038                             | 2                               | 2                               |
| SRN2009T-R68M   | 0.68                          | $\pm 20$ | 22                     | 250                  | 0.055                             | 1.5                             | 1.5                             |
| SRN2009T-1R0M   | 1.0                           | $\pm 20$ | 20                     | 200                  | 0.065                             | 1.4                             | 1.4                             |
| SRN2009T-1R5M   | 1.5                           | $\pm 20$ | 18                     | 170                  | 0.11                              | 1.2                             | 1.2                             |
| SRN2009T-2R2M   | 2.2                           | $\pm 20$ | 16                     | 150                  | 0.16                              | 0.9                             | 0.9                             |
| SRN2009T-3R3M   | 3.3                           | $\pm 20$ | 15                     | 120                  | 0.25                              | 0.85                            | 0.85                            |
| SRN2009T-4R7M   | 4.7                           | $\pm 20$ | 15                     | 90                   | 0.4                               | 0.75                            | 0.75                            |
| SRN2009T-6R8M   | 6.8                           | $\pm 20$ | 15                     | 80                   | 0.55                              | 0.65                            | 0.65                            |
| SRN2009T-100M   | 10                            | $\pm 20$ | 15                     | 60                   | 1                                 | 0.55                            | 0.6                             |

### Electrical Schematic

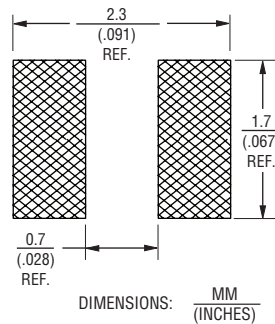


### How to Order

SRN2009T - R68M

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

### Recommended Layout



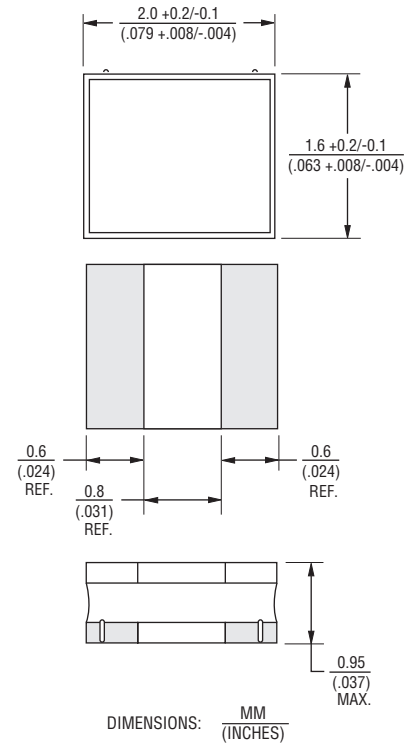
### General Specifications

Operating Temperature  
..... -40 °C to +125 °C  
(Temperature rise included)  
Storage Temperature (Component)  
..... -40 °C to +125 °C  
Temperature Rise ..... 40 °C at rated I<sub>rms</sub>  
Rated Current  
..... Inductance drops 30 % at I<sub>sat</sub>  
Moisture Sensitivity Level ..... 1  
ESD Classification (HBM) ..... N/A

### Materials

Core ..... Ferrite  
Wire ..... Enameled copper  
Terminal Finish ..... Sn  
Coating ..... Magnetic epoxy resin  
Packaging ..... 2000 pcs. per 7-inch reel

### Product Dimensions



\* 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.

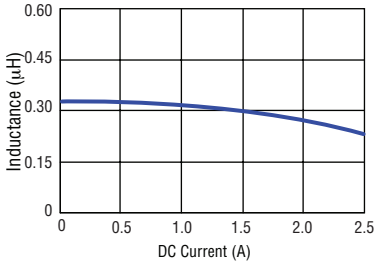
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# SRN2009T Series - Semi-shielded Power Inductors

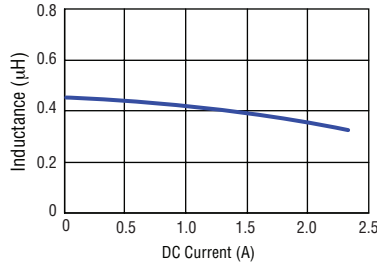
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## Inductance vs. Current

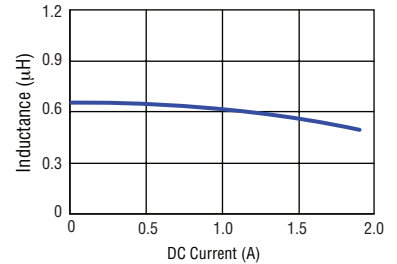
**SRN2009T-R33M**



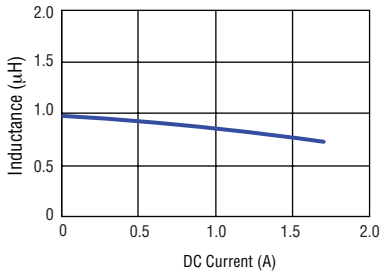
**SRN2009T-R47M**



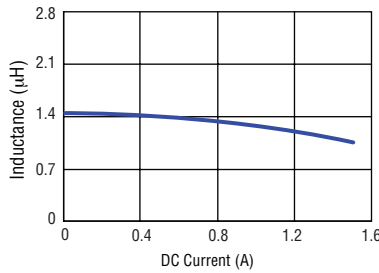
**SRN2009T-R68M**



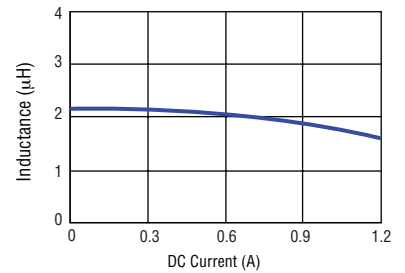
**SRN2009T-1R0M**



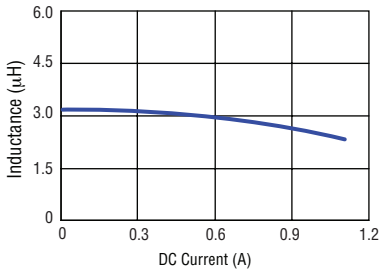
**SRN2009T-1R5M**



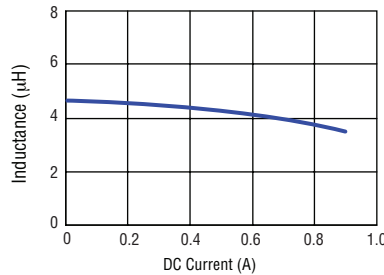
**SRN2009T-2R2M**



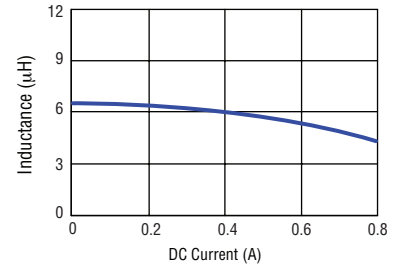
**SRN2009T-3R3M**



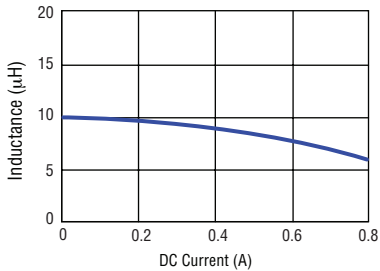
**SRN2009T-4R7M**



**SRN2009T-6R8M**



**SRN2009T-100M**



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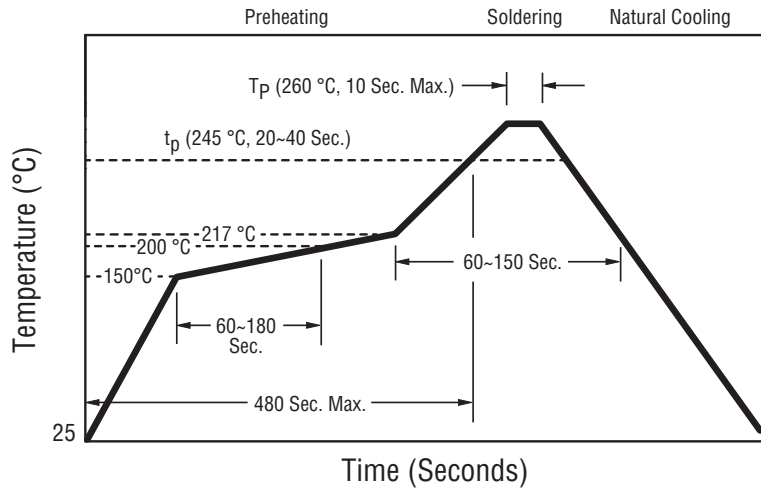
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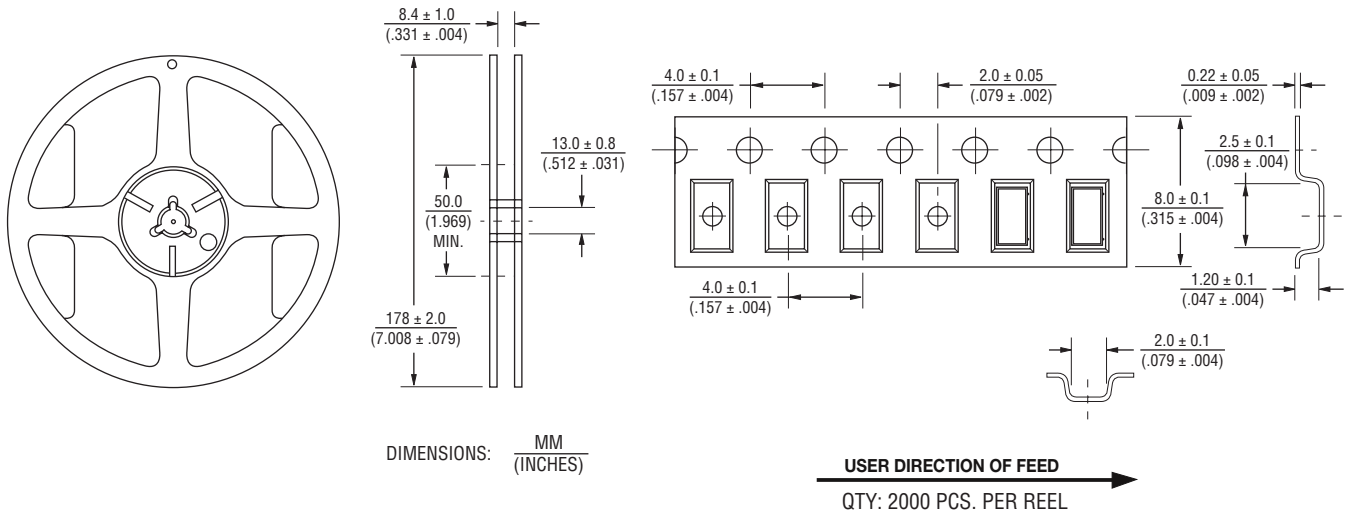
# SRN2009T Series - Semi-shielded Power Inductors

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## Soldering Profile



## Packaging Specifications



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