



## Features

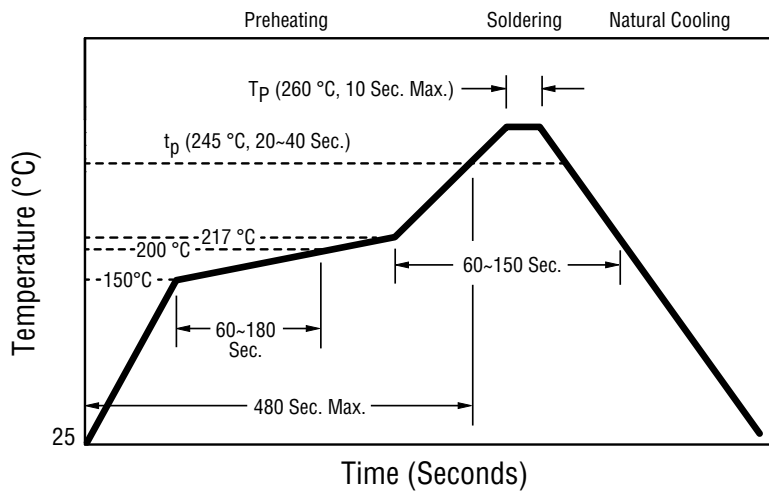
- Semi-shielded construction
- Inductance range: 0.47 to 22  $\mu$ H
- Rated current up to 3.2 A
- AEC-Q200 qualified
- RoHS compliant\* and halogen free\*\*

# SRN4012TA Series - Semi-shielded Power Inductors

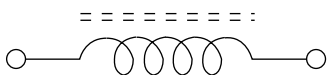
## Electrical Specifications @ 25 °C

| Bourns Part No. | Inductance @ 100 kHz / 1 V |          | Q (Min.) @ 100 kHz | SRF (MHz) Typ. | DCR ( $\Omega$ ) $\pm 20$ % | I <sub>rms</sub> (A) | I <sub>sat</sub> (A) |
|-----------------|----------------------------|----------|--------------------|----------------|-----------------------------|----------------------|----------------------|
|                 | L ( $\mu$ H)               | Tol. %   |                    |                |                             |                      |                      |
| SRN4012TA-R47M  | 0.47                       | $\pm 20$ | 6                  | 140            | 0.025                       | 3.2                  | 4                    |
| SRN4012TA-1R0M  | 1.0                        | $\pm 20$ | 6                  | 100            | 0.042                       | 2.2                  | 2.8                  |
| SRN4012TA-1R5M  | 1.5                        | $\pm 20$ | 6                  | 90             | 0.05                        | 2                    | 2.2                  |
| SRN4012TA-2R2M  | 2.2                        | $\pm 20$ | 6                  | 70             | 0.06                        | 1.9                  | 1.65                 |
| SRN4012TA-3R3M  | 3.3                        | $\pm 20$ | 6                  | 60             | 0.07                        | 1.7                  | 1.4                  |
| SRN4012TA-4R7M  | 4.7                        | $\pm 20$ | 6                  | 45             | 0.095                       | 1.5                  | 1.2                  |
| SRN4012TA-5R6M  | 5.6                        | $\pm 20$ | 6                  | 40             | 0.12                        | 1.4                  | 1.1                  |
| SRN4012TA-6R8M  | 6.8                        | $\pm 20$ | 6                  | 35             | 0.125                       | 1.3                  | 0.9                  |
| SRN4012TA-100M  | 10                         | $\pm 20$ | 10                 | 30             | 0.18                        | 1.1                  | 0.8                  |
| SRN4012TA-150M  | 15                         | $\pm 20$ | 10                 | 24             | 0.26                        | 0.75                 | 0.65                 |
| SRN4012TA-220M  | 22                         | $\pm 20$ | 10                 | 18             | 0.4                         | 0.62                 | 0.5                  |

## Soldering Profile



## Electrical Schematic



## How to Order

Model SRN4012TA - 100M  
 Value Code (see table)

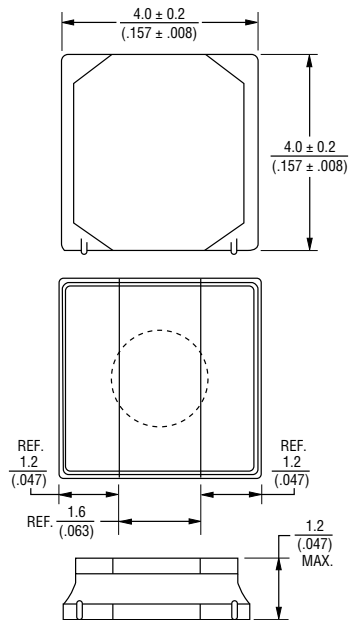
## General Specifications

Operating Temperature ..... -40 °C to +125 °C  
 (Temperature rise included)  
 Storage Temperature .. -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>  
 Failure In Time (FIT) ..... 24.7/10<sup>9</sup> hours  
 Mean Time Between Failures (MTBF)  
 ..... 40.4 x 10<sup>6</sup> hours

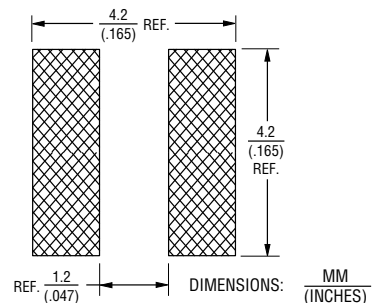
## Materials

Core ..... Ferrite  
 Wire ..... Enameled copper  
 Terminal Finish ..... Sn  
 Coating ..... Magnetic epoxy resin  
 Packaging ..... 4500 pcs. per 13-inch reel

## Product Dimensions



## Recommended Layout



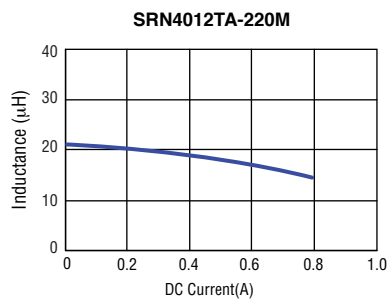
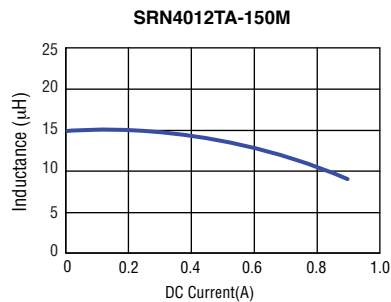
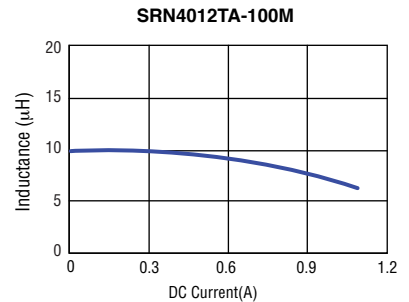
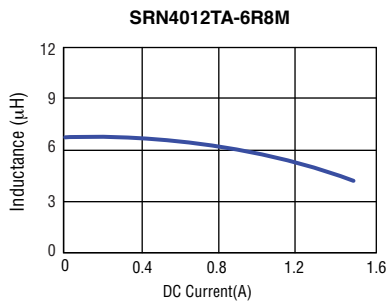
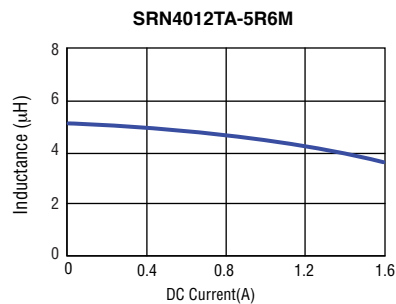
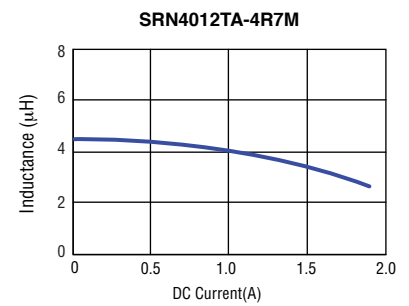
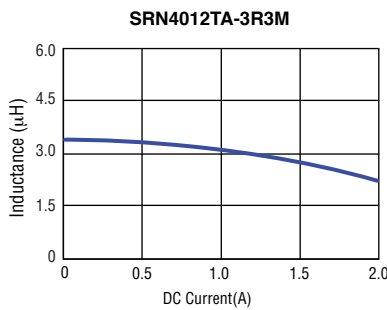
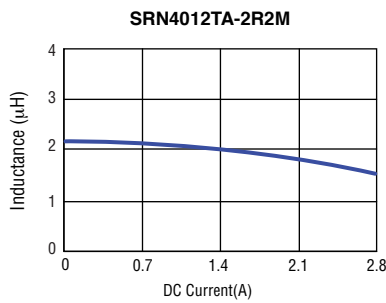
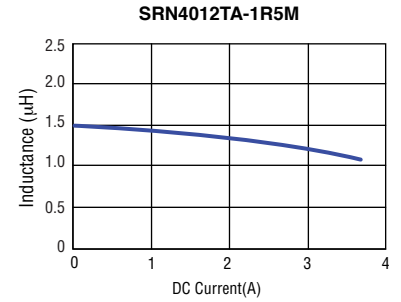
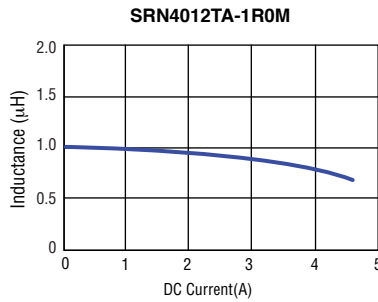
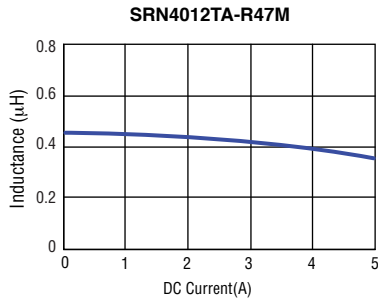
**WARNING Cancer and Reproductive Harm - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)**

\* 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.  
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# SRN4012TA Series - Semi-shielded Power Inductors

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## Inductance vs. Current



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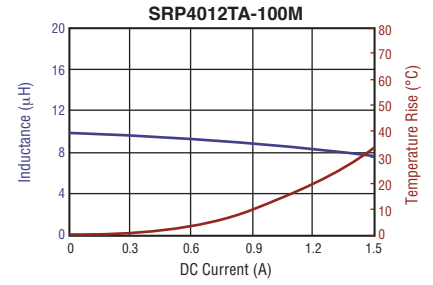
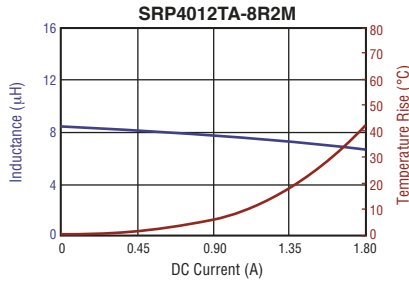
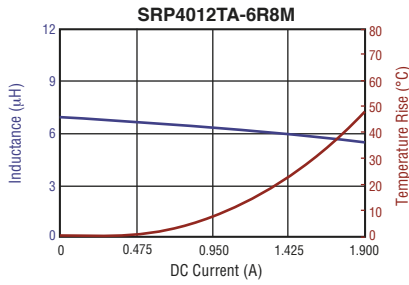
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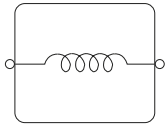
# SRP4012TA Series - Shielded Power Inductors



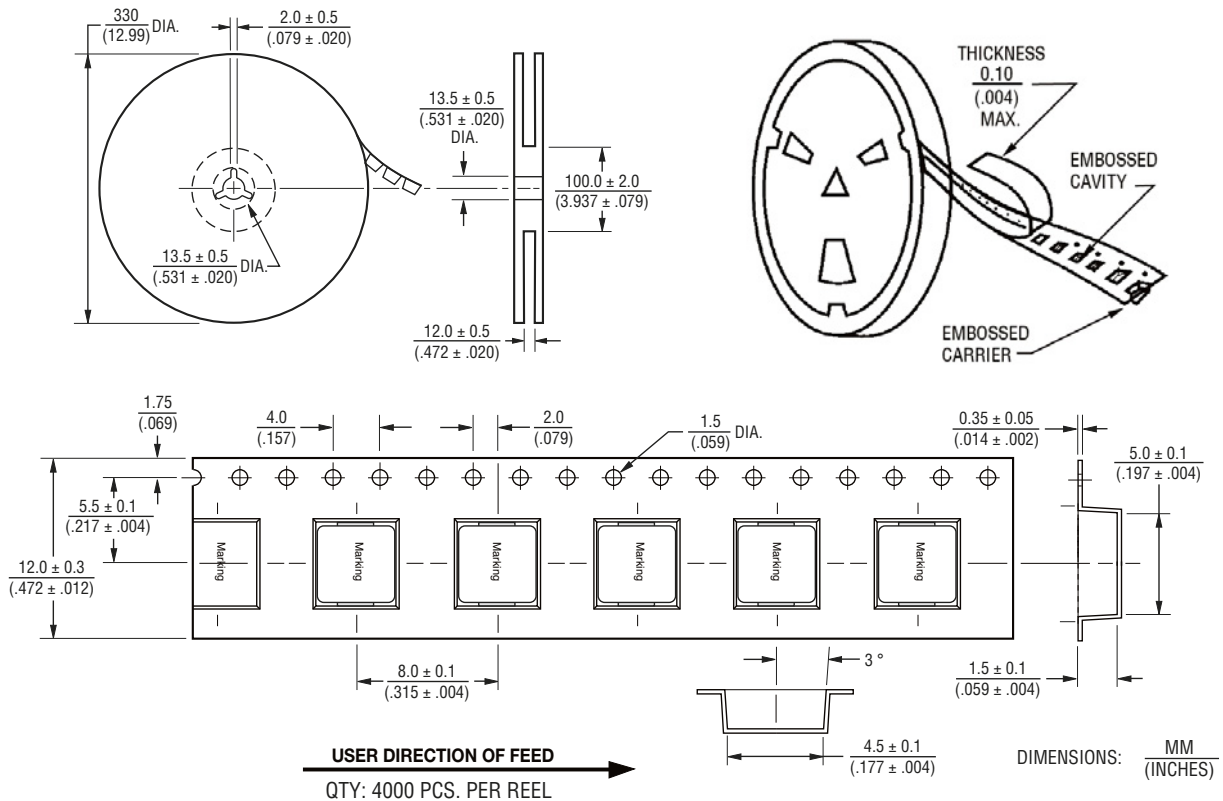
## L vs. I Charts



## Electrical Schematic



## Packaging Specifications



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