


## 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\*\*

 This series is currently available but not recommended for new designs. Contact Bourns for alternative product information.

## 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-1R2M  | 1.2                        | $\pm 20$ | 6                  | 90             | 0.05                        | 3.7                  | 5.6                  |
| 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                  |

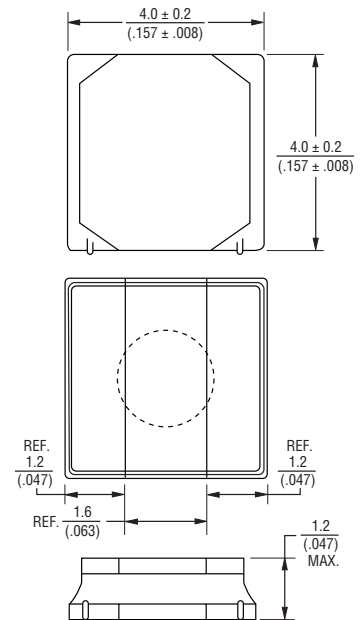
### General Specifications

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

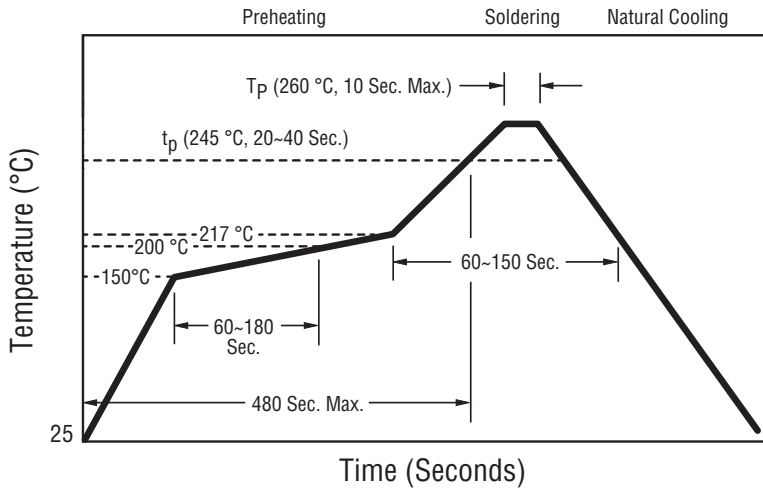
### Materials

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

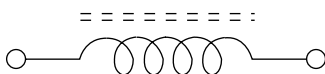
### Product Dimensions



### Soldering Profile



### Electrical Schematic

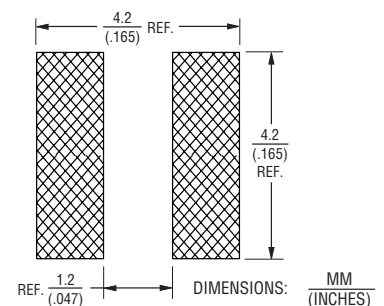


### How to Order

**SRN4012TA - 100M**

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

### Recommended Layout



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

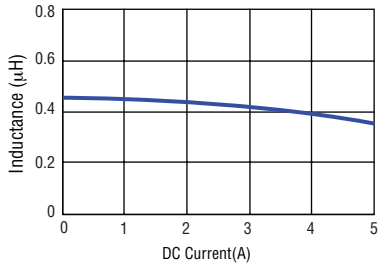
\* RoHS Directive 2015/863, Mar 31, 2015 and Annex.  
 \*\*Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.  
 Specifications are subject to change without notice.  
 Users should verify actual device performance in their specific applications.  
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# SRN4012TA Series - Semi-shielded Power Inductors

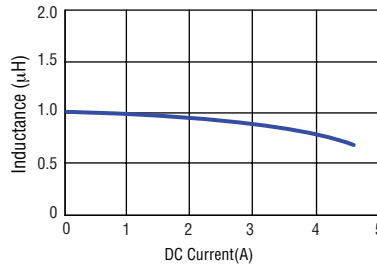
**BOURNS®**

## Inductance vs. Current

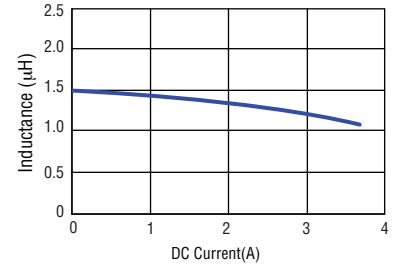
**SRN4012TA-R47M**



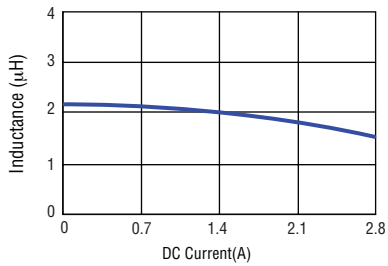
**SRN4012TA-1R0M**



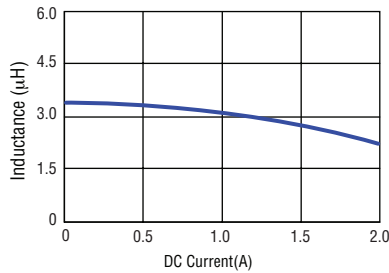
**SRN4012TA-1R5M**



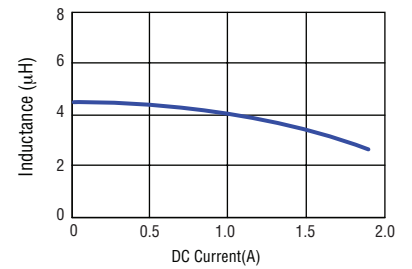
**SRN4012TA-2R2M**



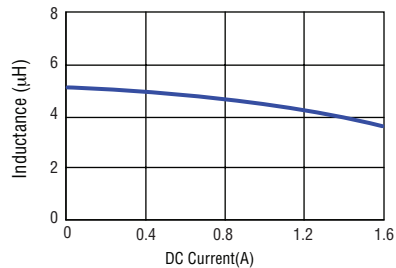
**SRN4012TA-3R3M**



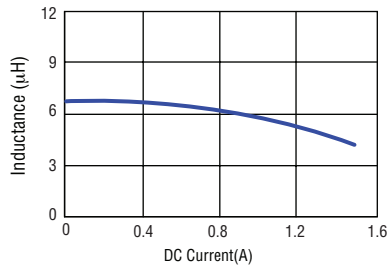
**SRN4012TA-4R7M**



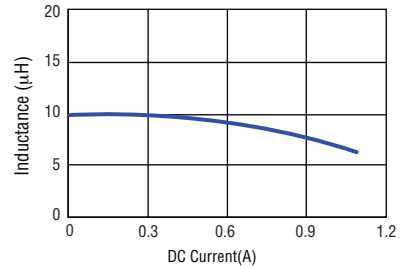
**SRN4012TA-5R6M**



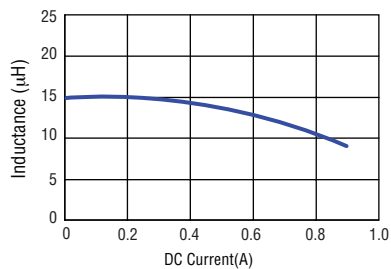
**SRN4012TA-6R8M**



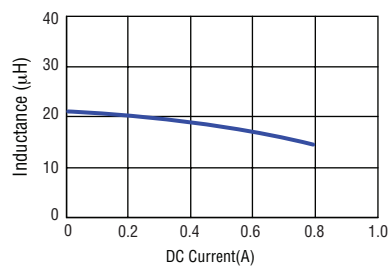
**SRN4012TA-100M**



**SRN4012TA-150M**



**SRN4012TA-220M**



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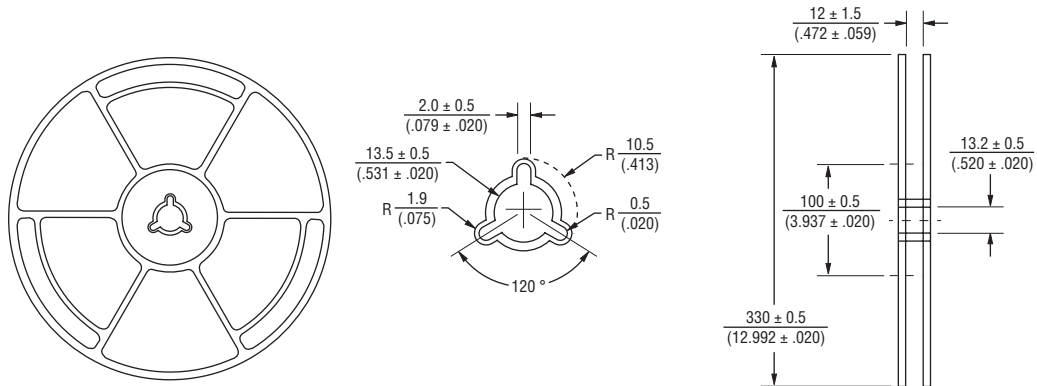
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# SRN4012TA Series - Semi-shielded Power Inductors

**BOURNS®**

## Packaging Specifications



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

USER DIRECTION OF FEED →

QTY: 4500 PCS. PER REEL

REV. 06/22

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