



## Features

- Shielded construction
- Carbonyl powder core
- High saturation current
- Low profile - 1.0 mm
- Inductance range: 0.10 to 10  $\mu$ H
- AEC-Q200 qualified
- RoHS compliant\* and halogen free\*\*

## SRP4012TA Series - Shielded Power Inductors

### Electrical Specifications @ 25 °C

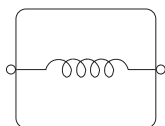
| Bourns<br>Part Number | Inductance<br>@ 100 KHz<br>/ 1 V |             | Q (Min.)<br>@ 100 KHz<br>/ 1 V | SRF<br>(MHz)<br>Typ. | DCR<br>(m $\Omega$ )<br>Typ. | DCR<br>(m $\Omega$ )<br>Max. | I <sub>rms</sub><br>(A) | I <sub>sat</sub><br>(A) | Terminal<br>Type |
|-----------------------|----------------------------------|-------------|--------------------------------|----------------------|------------------------------|------------------------------|-------------------------|-------------------------|------------------|
|                       | L ( $\mu$ H)                     | Tol.<br>(%) |                                |                      |                              |                              |                         |                         |                  |
| SRP4012TA-R10Y        | 0.10                             | $\pm 30$    | 5                              | 400                  | 4.3                          | 5.5                          | 11.5                    | 25                      | Lead<br>Frame    |
| SRP4012TA-R22M        | 0.22                             | $\pm 20$    | 5                              | 200                  | 6.6                          | 8                            | 8.5                     | 20                      |                  |
| SRP4012TA-R36M        | 0.36                             | $\pm 20$    | 10                             | 143                  | 15.5                         | 18                           | 6.5                     | 8.5                     |                  |
| SRP4012TA-R47M        | 0.47                             | $\pm 20$    | 10                             | 120                  | 18                           | 20                           | 6.0                     | 6.5                     |                  |
| SRP4012TA-R60M        | 0.60                             | $\pm 20$    | 10                             | 117                  | 22.5                         | 26                           | 5.3                     | 6                       |                  |
| SRP4012TA-1R0M        | 1.0                              | $\pm 20$    | 10                             | 80                   | 41                           | 47                           | 4.0                     | 6                       |                  |
| SRP4012TA-1R2M        | 1.2                              | $\pm 20$    | 10                             | 70                   | 48                           | 56                           | 3.5                     | 5                       |                  |
| SRP4012TA-1R5M        | 1.5                              | $\pm 20$    | 10                             | 62                   | 55                           | 63.3                         | 3.0                     | 4                       |                  |
| SRP4012TA-2R2M        | 2.2                              | $\pm 20$    | 10                             | 58                   | 69.2                         | 80                           | 2.8                     | 3.5                     |                  |
| SRP4012TA-3R3M        | 3.3                              | $\pm 20$    | 10                             | 41                   | 84                           | 97                           | 2.3                     | 3                       |                  |
| SRP4012TA-4R7M        | 4.7                              | $\pm 20$    | 10                             | 35                   | 128                          | 145                          | 2.0                     | 2.5                     |                  |
| SRP4012TA-5R6M        | 5.6                              | $\pm 20$    | 10                             | 30                   | 180                          | 208                          | 1.7                     | 2.3                     |                  |
| SRP4012TA-6R8M        | 6.8                              | $\pm 20$    | 10                             | 28                   | 300                          | 360                          | 1.5                     | 1.7                     |                  |
| SRP4012TA-8R2M        | 8.2                              | $\pm 20$    | 10                             | 25                   | 313                          | 376                          | 1.4                     | 1.6                     |                  |
| SRP4012TA-100M        | 10.0                             | $\pm 20$    | 10                             | 23                   | 410                          | 463                          | 1.3                     | 1.4                     |                  |

### How to Order

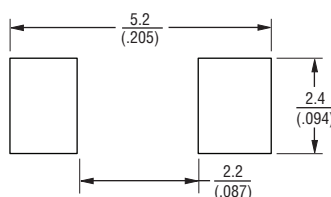
SRP4012TA - 100M

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

### Electrical Schematic



### Recommended Layout



### General Specifications

Test Voltage ..... 1.0 V  
Test Frequency ..... 100 KHz  
Operating Temperature  
..... -40 °C to +150 °C  
(Temperature rise included)  
Storage Temperature  
..... -40 °C to +125 °C  
Rated Current  
..... Inductance drops 20 % at I<sub>sat</sub>  
Temperature Rise ..... 40 °C at rated I<sub>rms</sub>  
Moisture Sensitivity Level ..... 1  
ESD Classification (HBM) ..... N/A

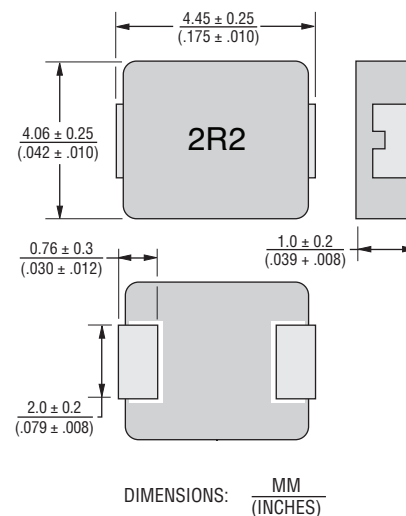
1 Circuit design, component, PCB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.

### Materials

Core ..... Carbonyl powder  
Wire ..... Enameled copper  
Terminal Finish ..... Sn  
Packaging ..... 4000 pcs. per 13-inch reel

### Product Dimensions

#### Lead Frame Terminal



**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.

Specifications are subject to change without notice.

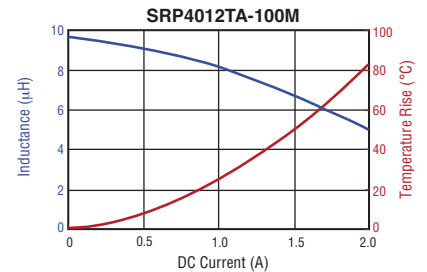
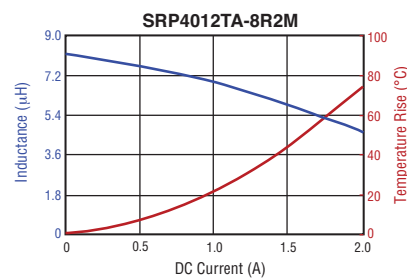
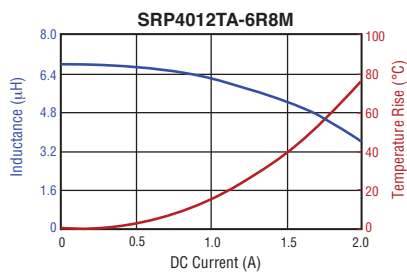
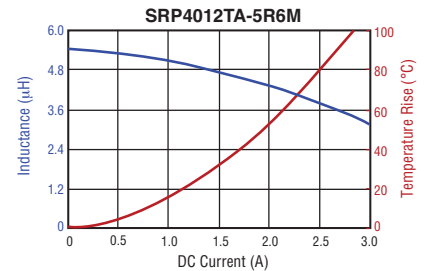
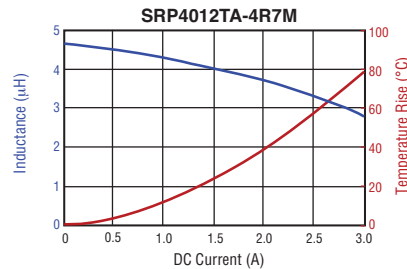
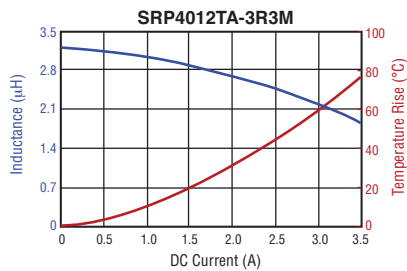
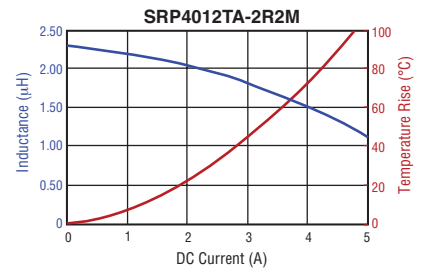
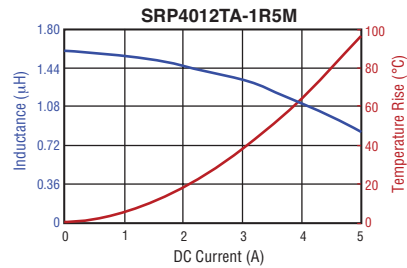
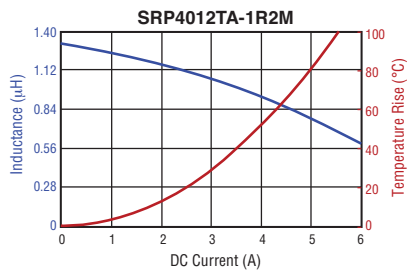
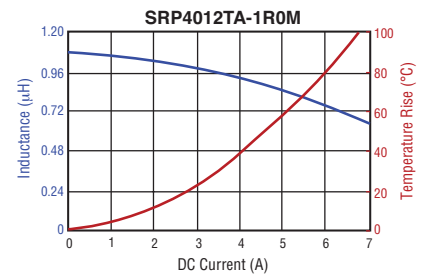
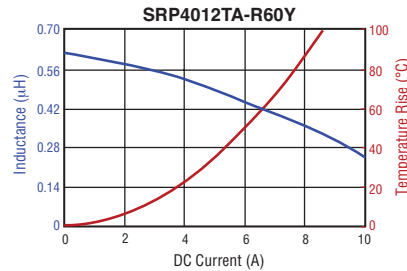
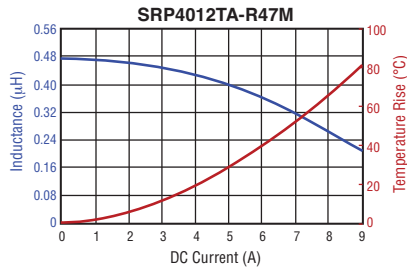
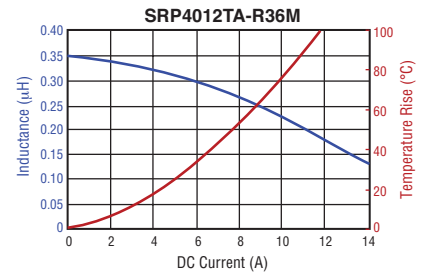
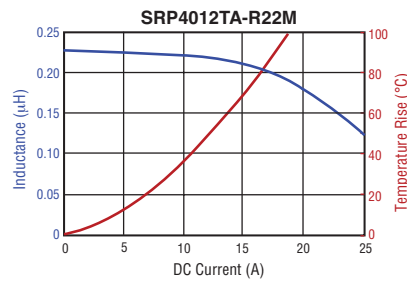
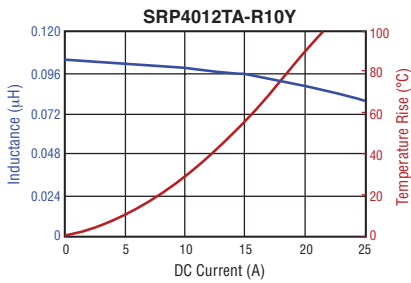
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## L vs. I Charts



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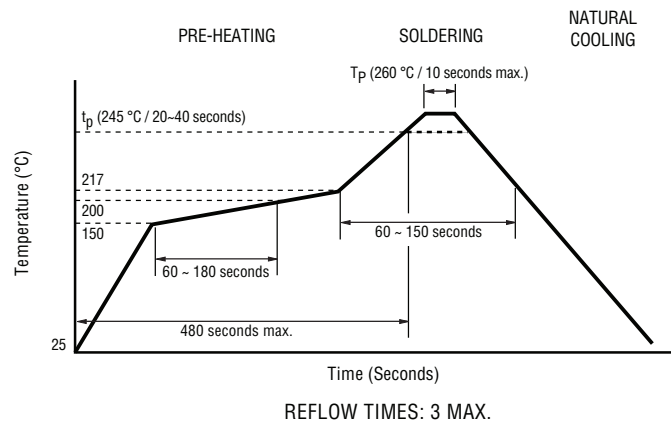
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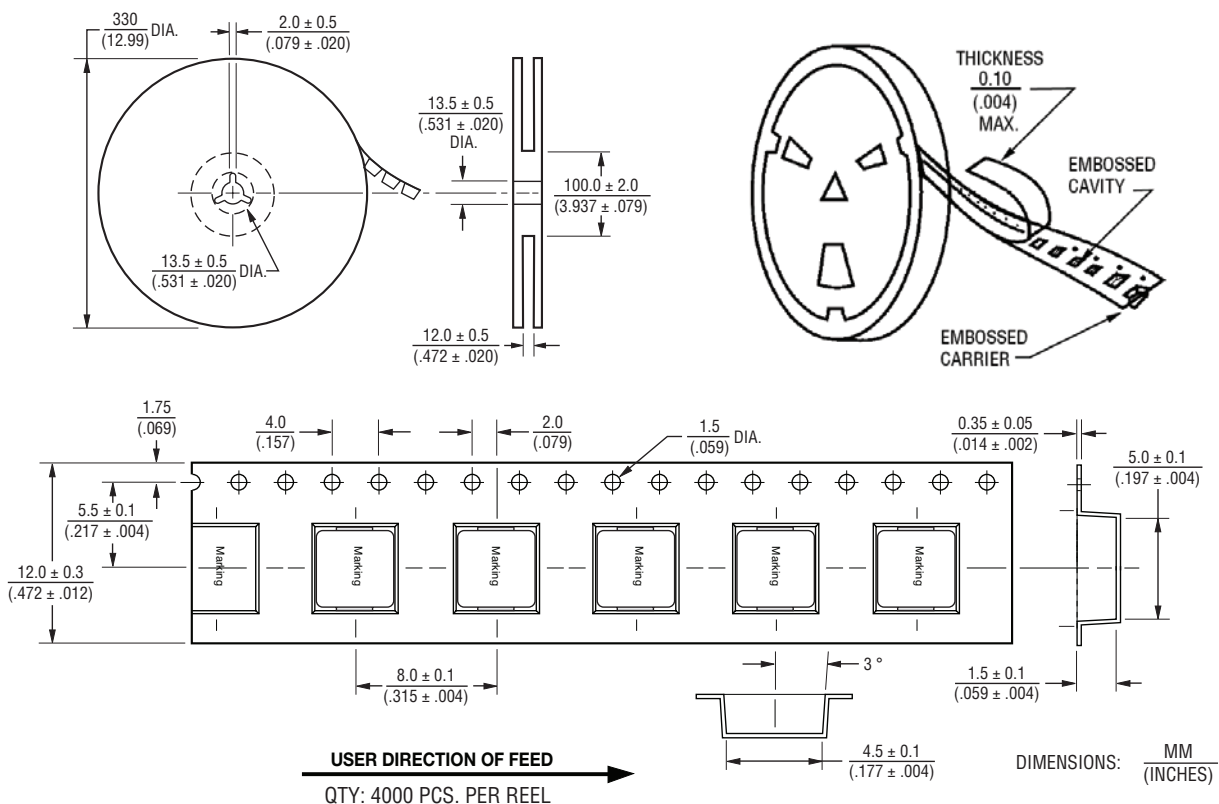
# SRP4012TA Series - Shielded Power Inductors

**BOURNS®**

## Soldering Profile



## Packaging Specifications



REV. 12/18

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