



## Features

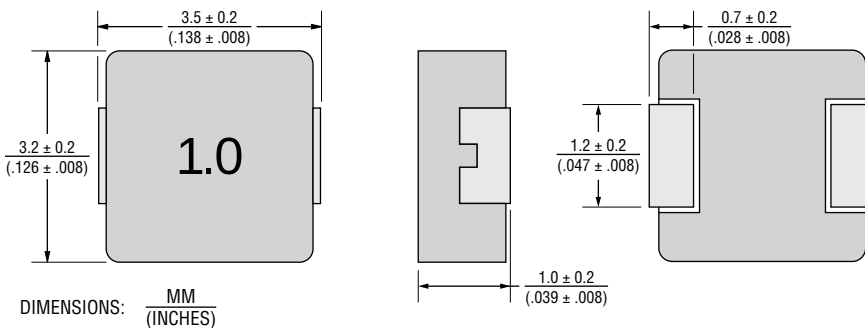
- Shielded construction
- Metal alloy powder core
- High saturation current
- Inductance range 0.15 to 10  $\mu$ H
- AEC-Q200 compliant
- RoHS compliant\* and halogen free\*\*

## SRP3012TA Series - Shielded Power Inductors

### Electrical Specifications @ 25 °C

| Bourns<br>Part Number | Inductance<br>@ 100 kHz / 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)<br>Typ. | I <sub>sat</sub><br>(A)<br>Typ. |
|-----------------------|-------------------------------|--------|----------------------|------------------------------|------------------------------|---------------------------------|---------------------------------|
|                       | L ( $\mu$ H)                  | Tol. % |                      |                              |                              |                                 |                                 |
| SRP3012TA-R15Y        | 0.15                          | ± 20 % | 195                  | 9.6                          | 11                           | 10                              | 14                              |
| SRP3012TA-R22M        | 0.22                          | ± 20 % | 170                  | 14                           | 17                           | 6.5                             | 10                              |
| SRP3012TA-R33M        | 0.33                          | ± 20 % | 150                  | 16                           | 20                           | 6.2                             | 9.2                             |
| SRP3012TA-R36M        | 0.36                          | ± 20 % | 125                  | 18.5                         | 23                           | 6.0                             | 8.5                             |
| SRP3012TA-R47M        | 0.47                          | ± 20 % | 107                  | 25                           | 30                           | 5.0                             | 7.2                             |
| SRP3012TA-R56M        | 0.56                          | ± 20 % | 90                   | 31                           | 36                           | 4.5                             | 6.6                             |
| SRP3012TA-R68M        | 0.68                          | ± 20 % | 85                   | 34                           | 40                           | 4.0                             | 6.1                             |
| SRP3012TA-R82M        | 0.82                          | ± 20 % | 71                   | 41                           | 48                           | 3.5                             | 5.8                             |
| SRP3012TA-1R0M        | 1.0                           | ± 20 % | 65                   | 50                           | 60                           | 3.3                             | 5.5                             |
| SRP3012TA-1R5M        | 1.5                           | ± 20 % | 55                   | 71                           | 85                           | 3.0                             | 4.0                             |
| SRP3012TA-2R2M        | 2.2                           | ± 20 % | 45                   | 98                           | 115                          | 2.7                             | 3.4                             |
| SRP3012TA-3R3M        | 3.3                           | ± 20 % | 40                   | 191                          | 210                          | 2.0                             | 3.1                             |
| SRP3012TA-4R7M        | 4.7                           | ± 20 % | 35                   | 266                          | 293                          | 1.6                             | 2.8                             |
| SRP3012TA-5R6M        | 5.6                           | ± 20 % | 32                   | 310                          | 360                          | 1.5                             | 2.2                             |
| SRP3012TA-6R8M        | 6.8                           | ± 20 % | 29                   | 360                          | 400                          | 1.4                             | 2.0                             |
| SRP3012TA-8R2M        | 8.2                           | ± 20 % | 26                   | 420                          | 463                          | 1.2                             | 1.7                             |
| SRP3012TA-100M        | 10                            | ± 20 % | 23                   | 498                          | 550                          | 1.0                             | 1.4                             |

### Product Dimensions



### General Specifications

#### Operating Temperature

.....-55 °C to +150 °C  
(Temperature rise included)

#### Storage Temperature (Component)

.....-55 °C to +150 °C

#### Rated Current

..... Inductance drops 30 % at Isat

#### Temperature Rise ... 40 °C at rated I<sub>rms</sub><sup>1</sup>

MSL .....1

ESD Classification (HBM)..... N/A

Note 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.....Metal alloy powder

Wire ..... Enameled copper

Terminal Finish ..... Sn/Ni

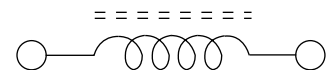
Packaging ..... 4000 pcs. per 13-inch reel

### How to Order

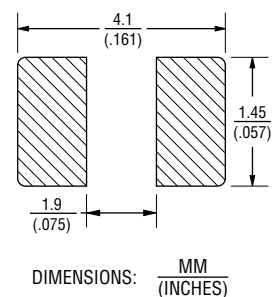
**SRP3012TA - 1R0M**

Model .....  
Value Code (see table) .....

### Schematic



### Recommended Layout



\* 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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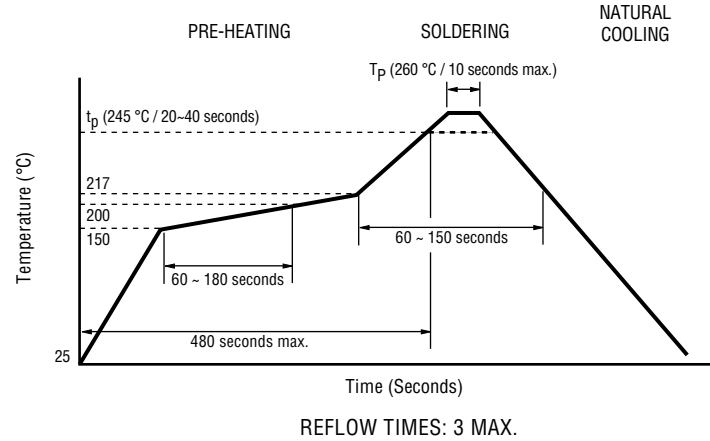


**WARNING**  
**Cancer and Reproductive Harm**  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

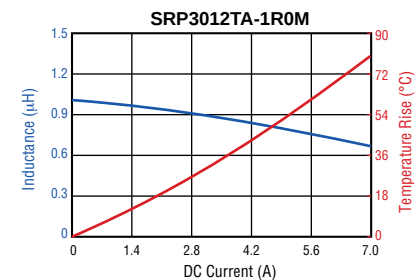
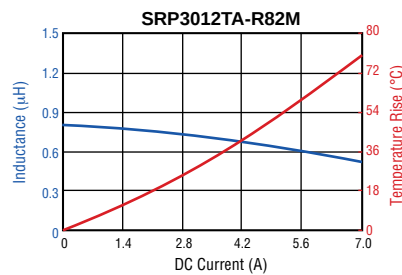
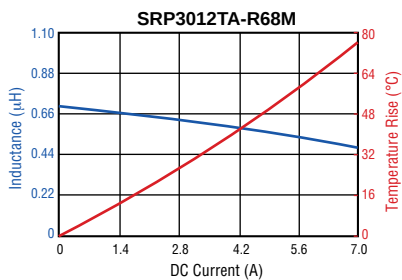
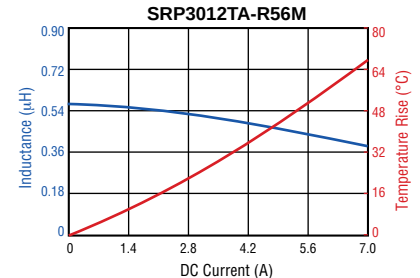
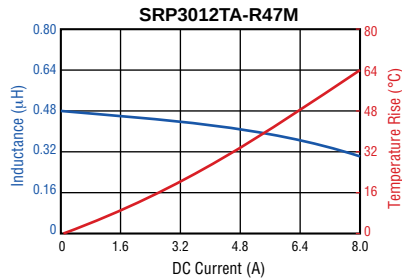
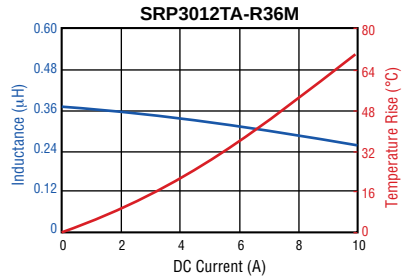
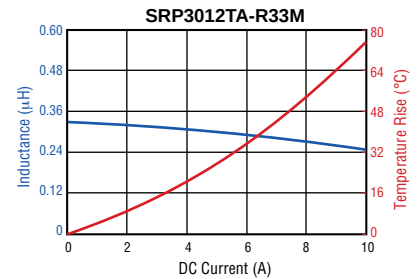
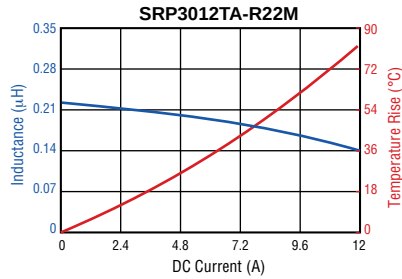
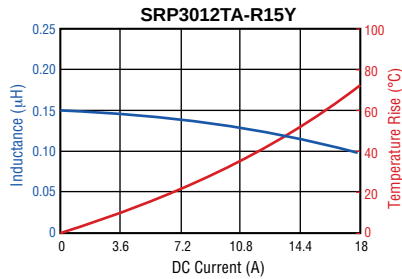
# SRP3012TA Series - Shielded Power Inductors

**BOURNS®**

## Soldering Profile



## L vs. I Charts



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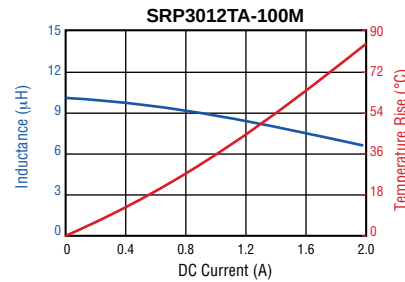
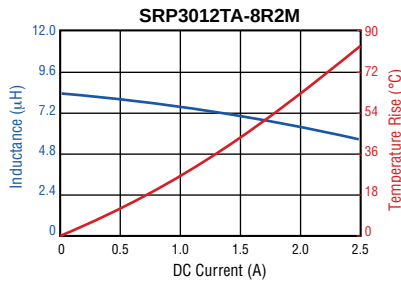
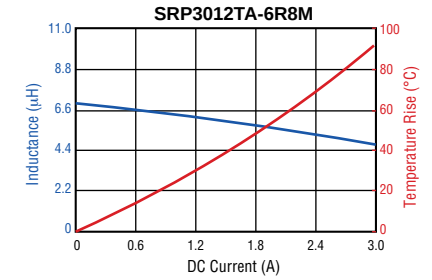
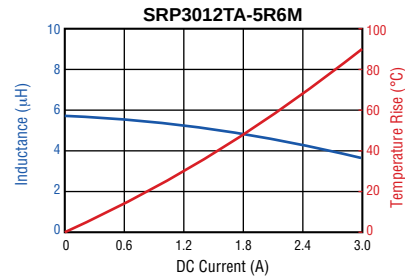
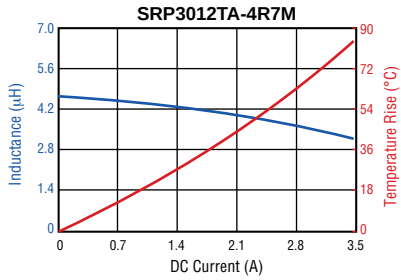
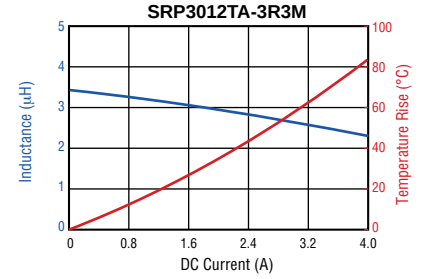
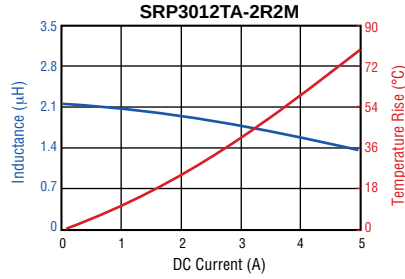
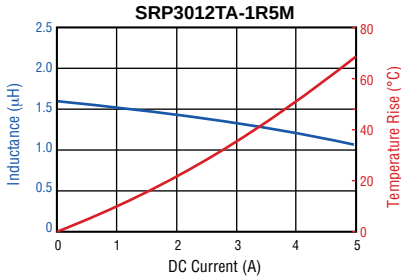
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### L vs. I Charts (Continued)



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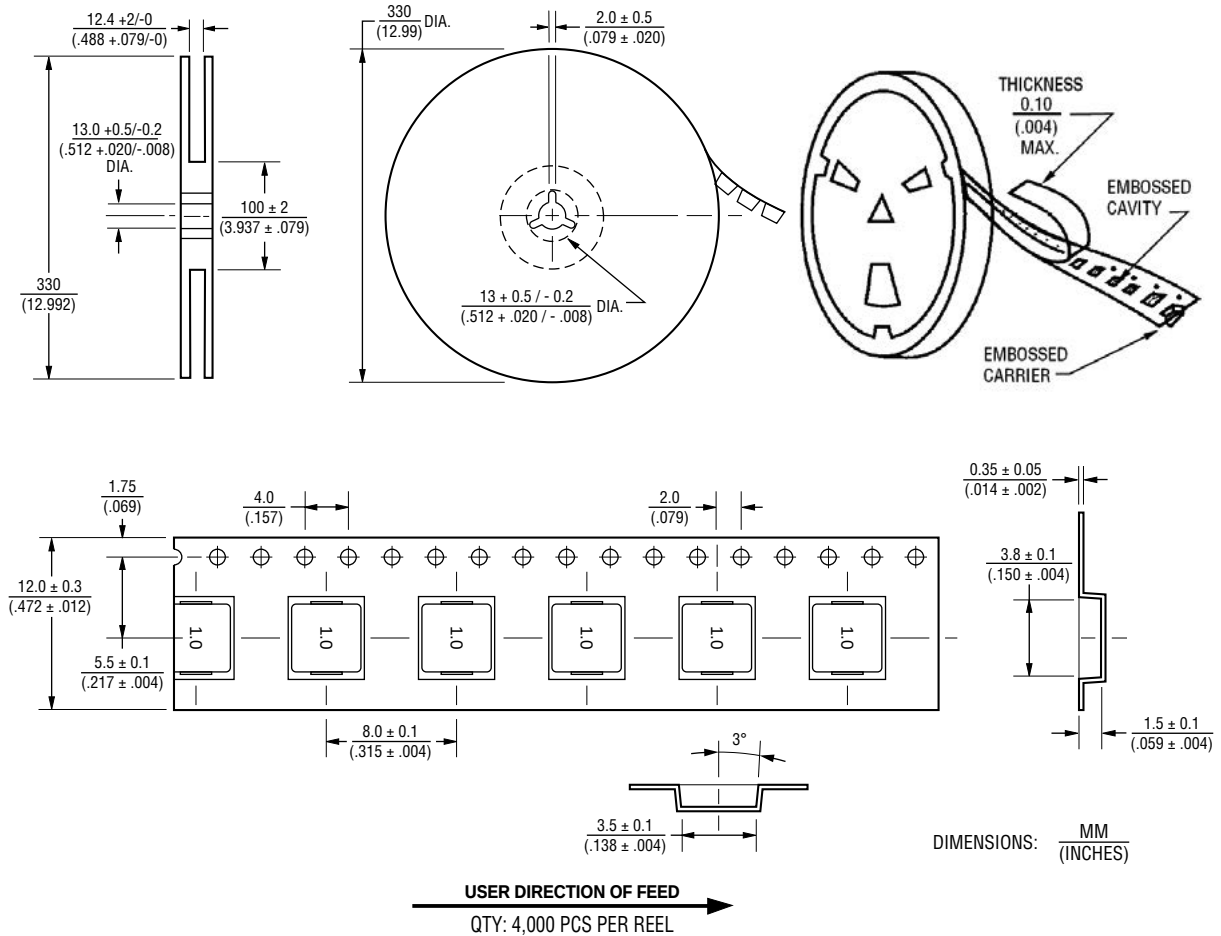
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# SRP3012TA Series - Shielded Power Inductors

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## Packaging Specifications



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