



## Features

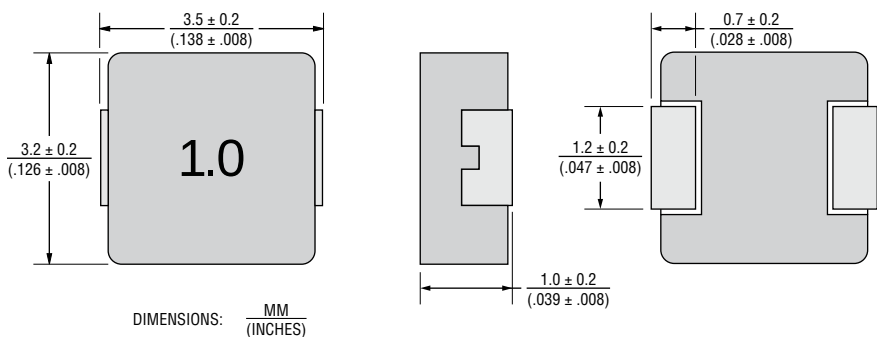
- Shielded construction
- Metal alloy powder core
- High saturation current
- Inductance range 0.15 to 10  $\mu$ H
- AEC-Q200 compliant
- RoHS compliant\* and halogen free\*\*

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

### Product Dimensions



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



**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.

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### 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 Irms<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 .....Enamelled copper

Terminal Finish ..... Sn/Ni

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

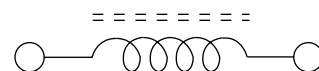
### How to Order

**SRP3012TA - 1R0M**

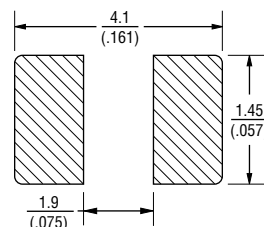
Model \_\_\_\_\_

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

### Schematic



### Recommended Layout

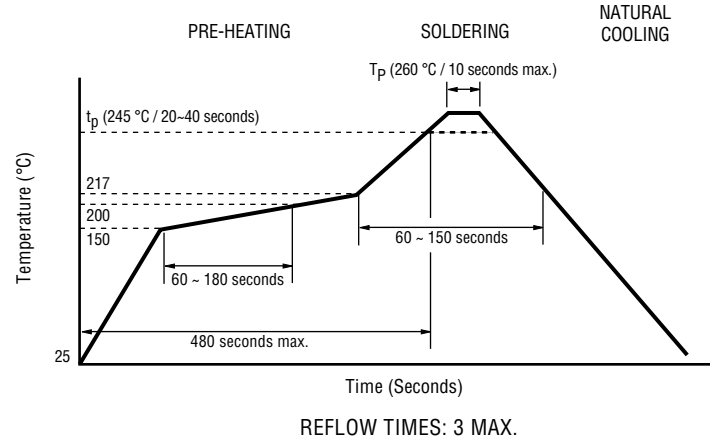


DIMENSIONS:  $\frac{\text{MM}}{(\text{INCHES})}$

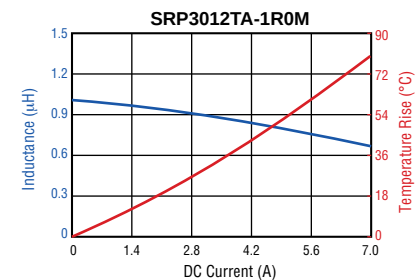
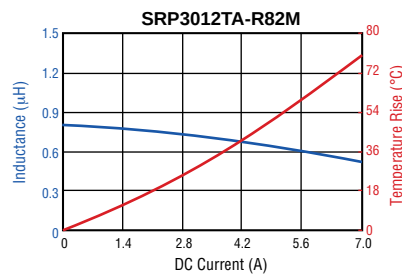
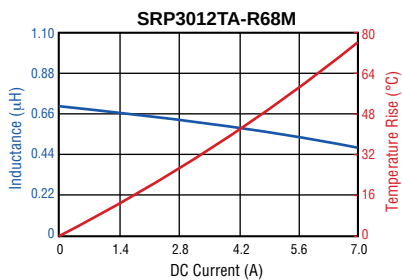
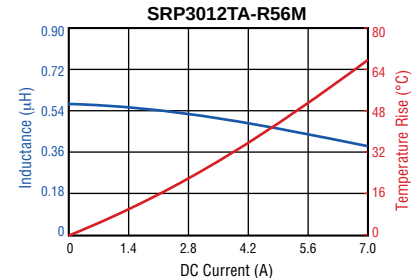
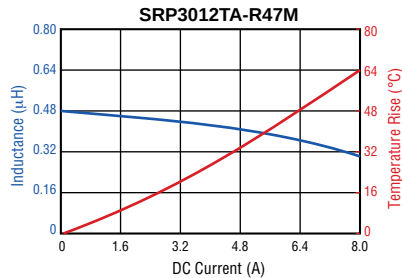
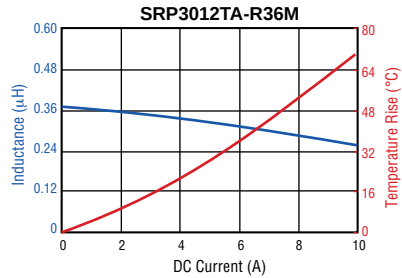
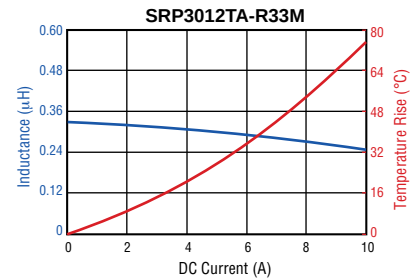
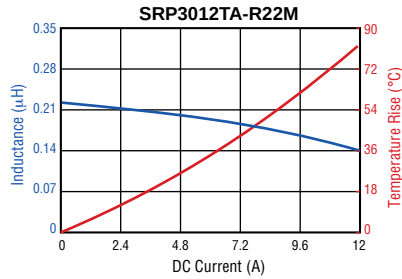
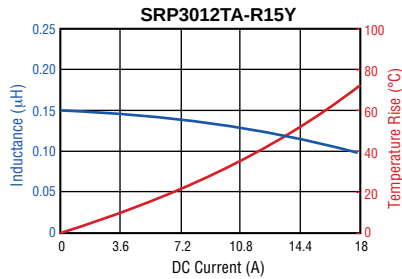
# SRP3012TA Series - Shielded Power Inductors

**BOURNS®**

## Soldering Profile



## L vs. I Charts



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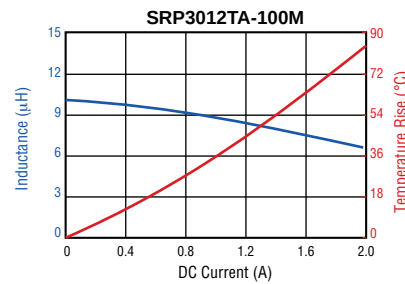
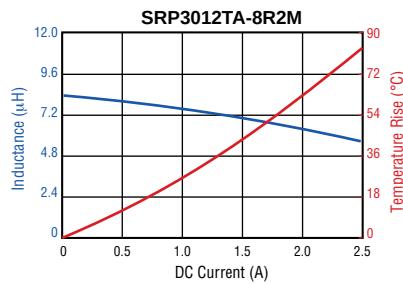
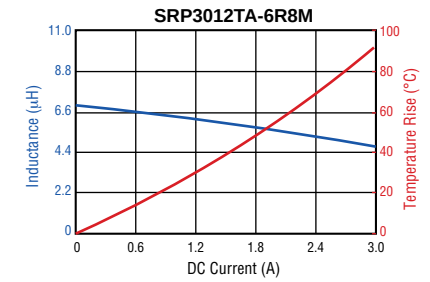
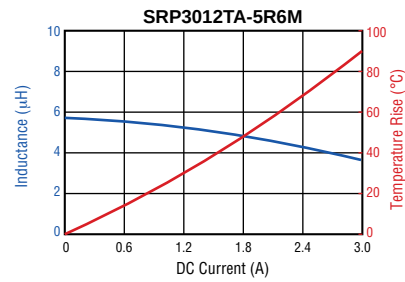
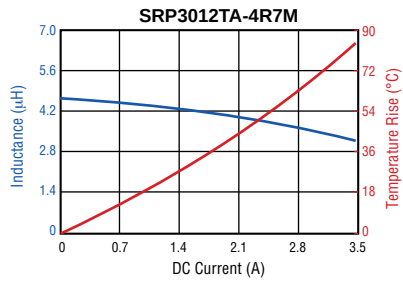
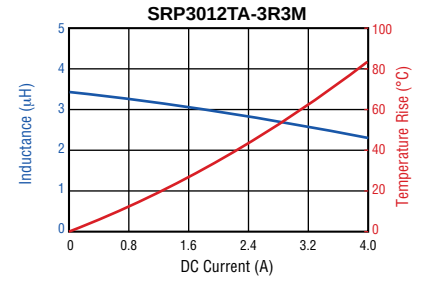
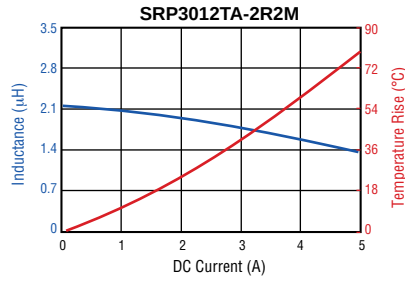
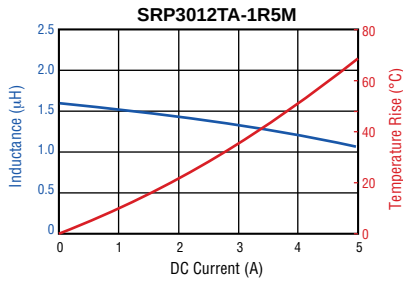
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### L vs. I Charts (Continued)



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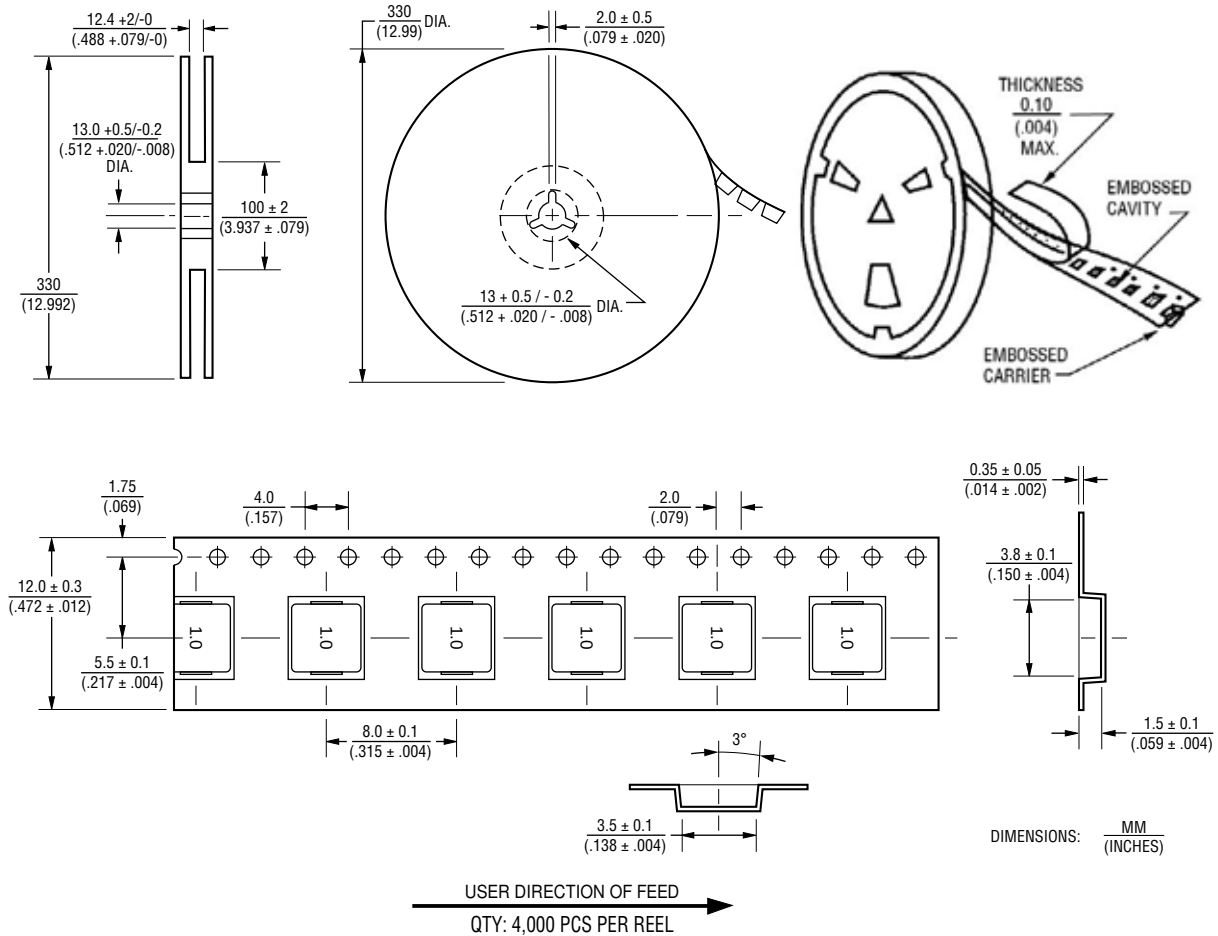
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## SRP3012TA Series - Shielded Power Inductors

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### Packaging Specifications



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