



**THE DATASHEET OF  
SRP5015TA-6R8M**





### Features

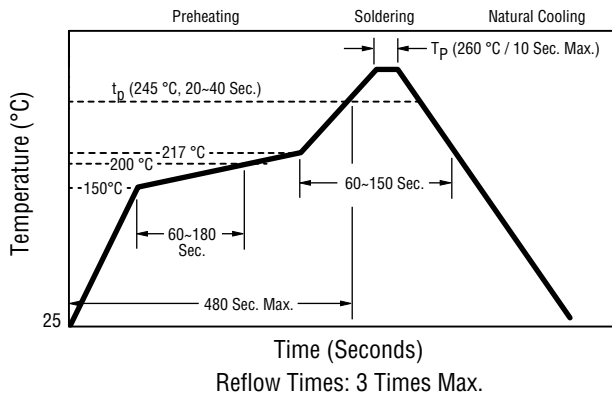
- Shielded construction
- Carbonyl powder core
- High saturation current
- Inductance range: 0.15 to 22  $\mu$ H
- AEC-Q200 qualified
- RoHS compliant\* and halogen free\*\*

## SRP5015TA Series - Shielded Power Inductors

### Electrical Specifications @ 25 °C

| Bourns Part Number | Inductance @ 100 KHz / 1 V |          | Q (Min.) @100 KHz / 1 V | SRF (MHz) Typ. | DCR (m $\Omega$ ) Typ. | DCR (m $\Omega$ ) Max. | I <sub>rms</sub> (A) | I <sub>sat</sub> (A) | Terminal Type |
|--------------------|----------------------------|----------|-------------------------|----------------|------------------------|------------------------|----------------------|----------------------|---------------|
|                    | L ( $\mu$ H)               | Tol. (%) |                         |                |                        |                        |                      |                      |               |
| SRP5015TA-R15Y     | 0.15                       | $\pm 30$ | 5                       | 220            | 3.6                    | 4.1                    | 16                   | 25                   | Lead Frame    |
| SRP5015TA-R20Y     | 0.20                       | $\pm 30$ | 5                       | 180            | 3.8                    | 4.2                    | 15                   | 22.5                 |               |
| SRP5015TA-R22Y     | 0.22                       | $\pm 30$ | 5                       | 165            | 5                      | 6.5                    | 12                   | 20                   |               |
| SRP5015TA-R33M     | 0.33                       | $\pm 20$ | 5                       | 120            | 8.5                    | 9.8                    | 9                    | 16                   |               |
| SRP5015TA-R47M     | 0.47                       | $\pm 20$ | 5                       | 110            | 12                     | 13.8                   | 8                    | 15                   |               |
| SRP5015TA-R68M     | 0.68                       | $\pm 20$ | 5                       | 85             | 14                     | 16.2                   | 7                    | 13                   |               |
| SRP5015TA-1R0M     | 1.0                        | $\pm 20$ | 10                      | 75             | 22                     | 25.3                   | 6                    | 9                    |               |
| SRP5015TA-1R5M     | 1.5                        | $\pm 20$ | 10                      | 57             | 39                     | 45                     | 4.5                  | 7                    |               |
| SRP5015TA-2R2M     | 2.2                        | $\pm 20$ | 10                      | 48             | 45                     | 52                     | 4                    | 6                    |               |
| SRP5015TA-3R3M     | 3.3                        | $\pm 20$ | 10                      | 35             | 78                     | 90                     | 3.2                  | 4.5                  |               |
| SRP5015TA-4R7M     | 4.7                        | $\pm 20$ | 10                      | 29             | 103                    | 118                    | 2.7                  | 4                    |               |
| SRP5015TA-5R6M     | 5.6                        | $\pm 20$ | 10                      | 27             | 126                    | 152                    | 2.4                  | 3.2                  |               |
| SRP5015TA-6R8M     | 6.8                        | $\pm 20$ | 10                      | 24             | 142                    | 171                    | 2.3                  | 3                    |               |
| SRP5015TA-8R2M     | 8.2                        | $\pm 20$ | 10                      | 22             | 175                    | 210                    | 2.1                  | 2.6                  |               |
| SRP5015TA-100M     | 10                         | $\pm 20$ | 10                      | 21             | 210                    | 235                    | 2                    | 2.3                  |               |
| SRP5015TA-220M     | 22                         | $\pm 20$ | 10                      | 13             | 405                    | 466                    | 1.2                  | 1.7                  |               |

### Soldering Profile

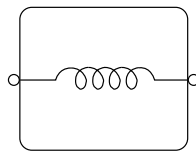


### How to Order

SRP5015TA - 100 M

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

### Schematic



### General Specifications

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

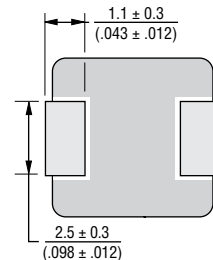
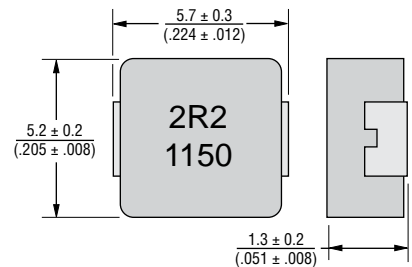
Note 1: Circuit design, component, PCB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.

### Materials

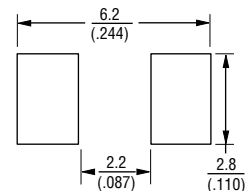
Core ..... Carbonyl powder  
 Wire ..... Enameled copper  
 Terminal Finish ..... Sn  
 Packaging ..... 3500 pcs. per 13-inch reel

### Product Dimensions

#### Lead Frame Terminal



### Recommended Layout



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



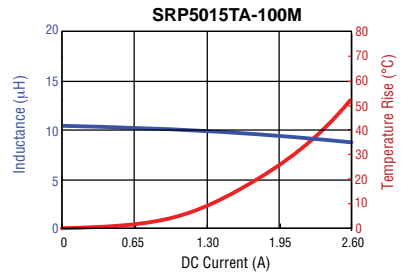
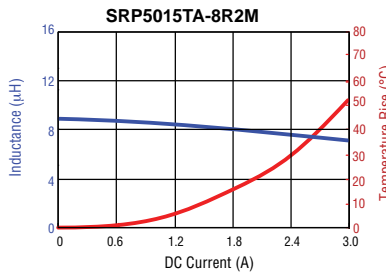
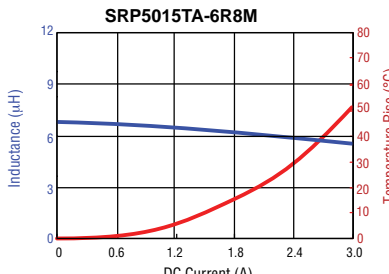
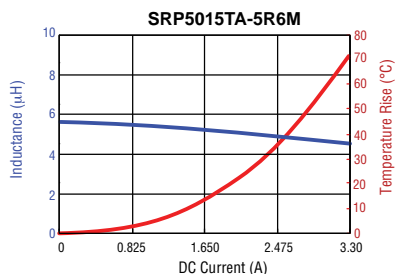
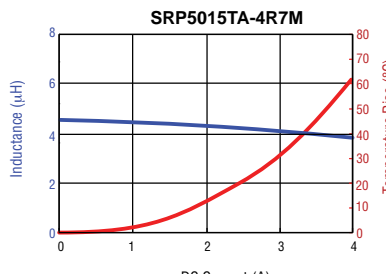
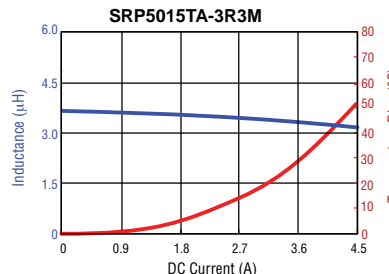
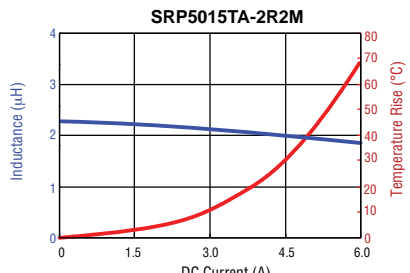
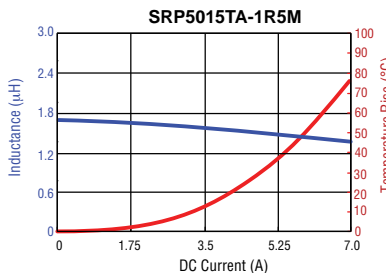
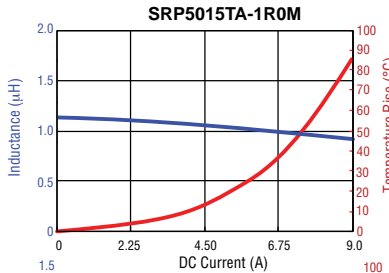
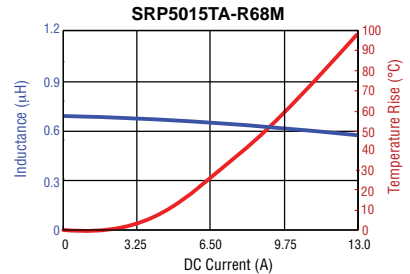
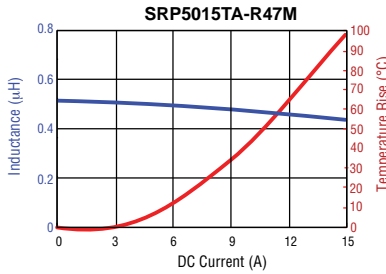
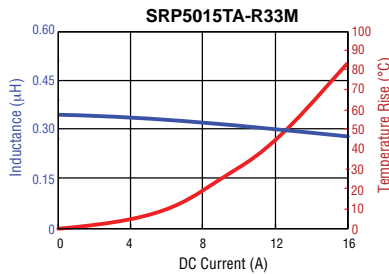
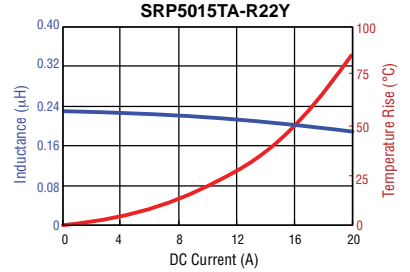
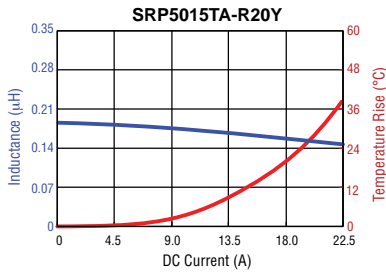
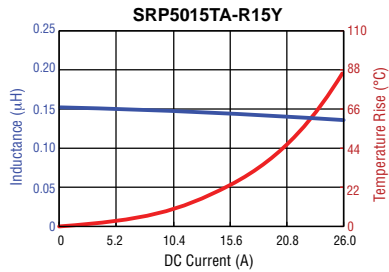
**WARNING Cancer and Reproductive Harm** [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

\* 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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# SRP5015TA Series - Shielded Power Inductors



## L vs. I Charts

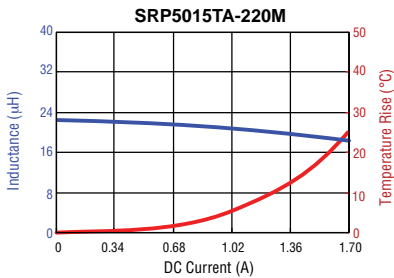


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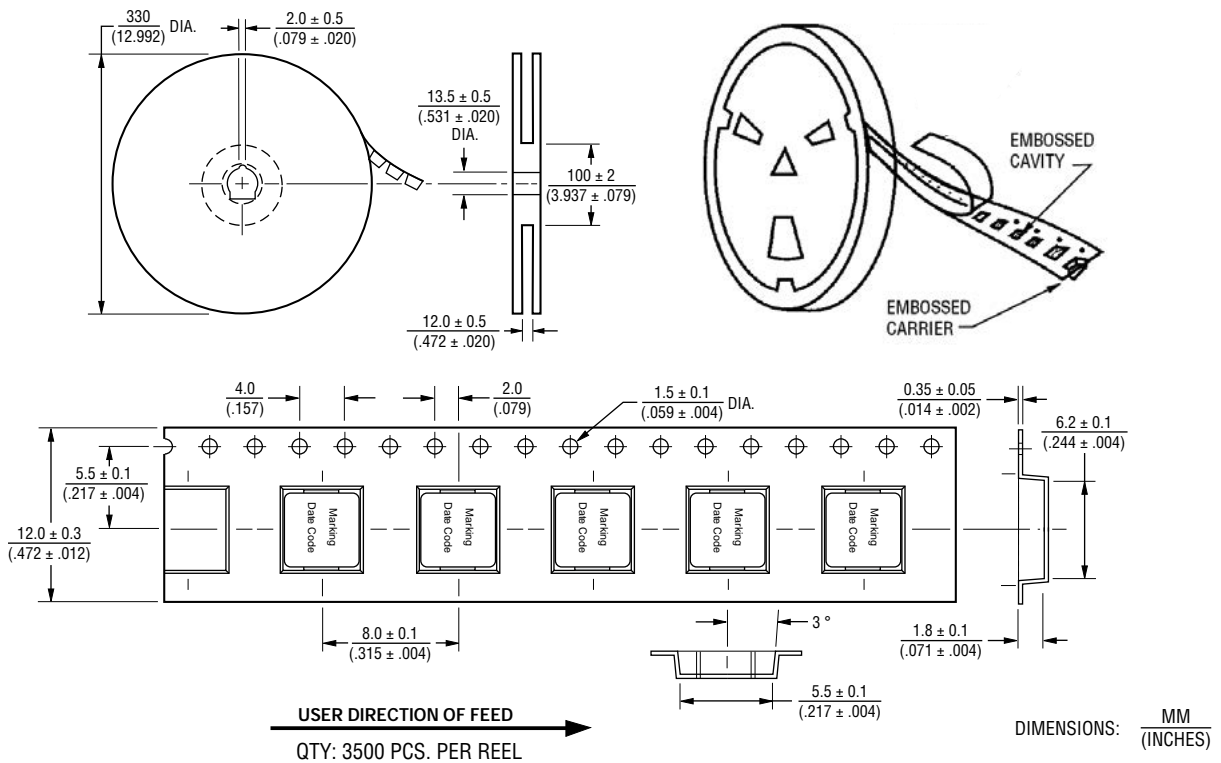
# SRP5015TA Series - Shielded Power Inductors



## L vs. I Charts (Continued)



## Packaging Specifications



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