

### Features

- Shielded construction
- Carbonyl powder core
- High saturation current
- Inductance range: 0.22 to 47  $\mu$ H
- AEC-Q200 qualified
- RoHS compliant\* and halogen free\*\*

### Applications

- Automotive systems:
  - Driver assistant
  - Information
  - Entertainment
  - Lighting
- DC/DC converters
- Power supplies

## SRP1038A Series - Shielded Power Inductors

### Electrical Specifications @ 25 °C

| Bourns Part Number | Inductance @ 100 KHz / 1 V |          | DCR (m $\Omega$ ) Max. | I <sub>rms</sub> (A) | I <sub>sat</sub> (A) |
|--------------------|----------------------------|----------|------------------------|----------------------|----------------------|
|                    | L ( $\mu$ H)               | Tol. (%) |                        |                      |                      |
| SRP1038A-R22M      | 0.22                       | 20       | 1                      | 35                   | 60                   |
| SRP1038A-R27M      | 0.27                       | 20       | 1                      | 33                   | 60                   |
| SRP1038A-R36M      | 0.36                       | 20       | 1.2                    | 31                   | 60                   |
| SRP1038A-R39M      | 0.39                       | 20       | 1.3                    | 30                   | 60                   |
| SRP1038A-R45M      | 0.45                       | 20       | 1.5                    | 29                   | 45                   |
| SRP1038A-R56M      | 0.56                       | 20       | 1.8                    | 25                   | 40                   |
| SRP1038A-1R0M      | 1.0                        | 20       | 3.3                    | 18                   | 36                   |
| SRP1038A-1R5M      | 1.5                        | 20       | 4.6                    | 16                   | 33                   |
| SRP1038A-2R2M      | 2.2                        | 20       | 7                      | 12                   | 27                   |
| SRP1038A-3R3M      | 3.3                        | 20       | 11.8                   | 11                   | 20                   |
| SRP1038A-4R7M      | 4.7                        | 20       | 15.5                   | 10                   | 17                   |
| SRP1038A-6R8M      | 6.8                        | 20       | 23.3                   | 8.5                  | 13.5                 |
| SRP1038A-8R2M      | 8.2                        | 20       | 24                     | 8                    | 12.5                 |
| SRP1038A-100M      | 10                         | 20       | 30                     | 7.5                  | 12                   |
| SRP1038A-150M      | 15                         | 20       | 45                     | 6.25                 | 10                   |
| SRP1038A-220M      | 22                         | 20       | 74                     | 5                    | 7                    |
| SRP1038A-330M      | 33                         | 20       | 112                    | 3.5                  | 5                    |
| SRP1038A-470M      | 47                         | 20       | 167                    | 3                    | 4.5                  |

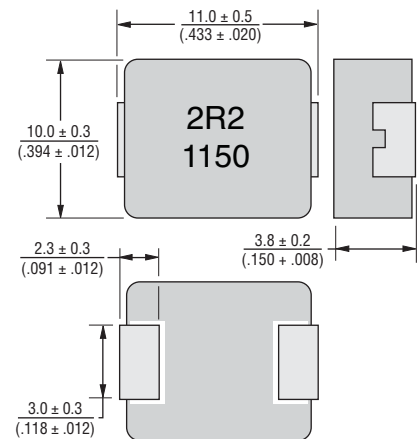
### General Specifications

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>  
 Resistance to Soldering Heat ..... +260 °C, 40 sec. max.

### Materials

Core ..... Carbonyl powder  
 Wire ..... Enameled copper  
 Terminal Finish ..... Sn  
 Packaging ..... 500 pcs. per 13-inch reel

### Product Dimensions

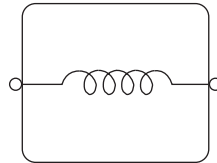


### How to Order

**SRP1038A - 100M**

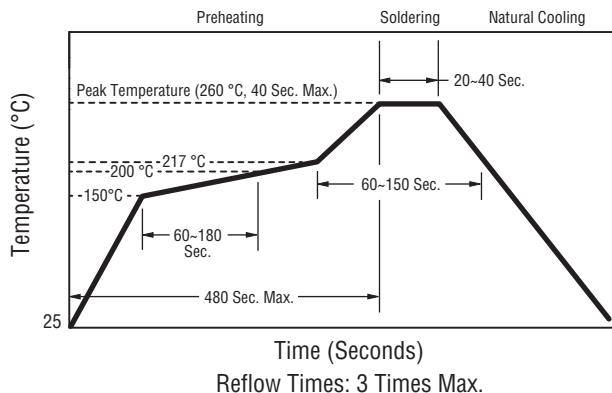
Model \_\_\_\_\_  
 Value Code (see table) \_\_\_\_\_

### Electrical Schematic

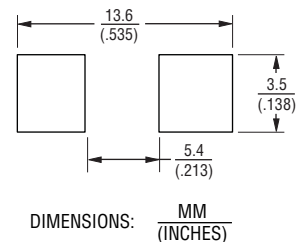


### Soldering Profile

Peak Temperature: 260 °C max.  
 Max. Peak Temperature 260 °C: 40 sec. max.  
 Max. Time Above 217 °C: 60~150 sec. max.



### Recommended Layout



\* RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.

\*\* Bourns follows the prevailing definition of "halogen free" in the industry. 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.

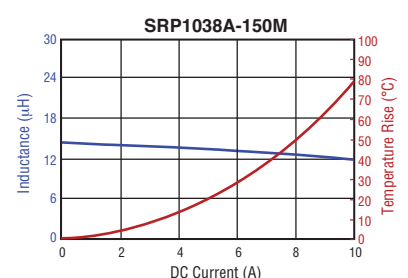
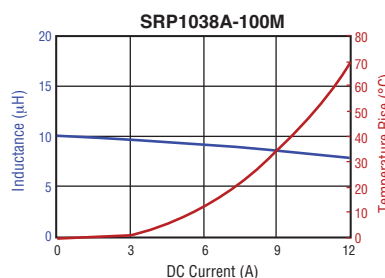
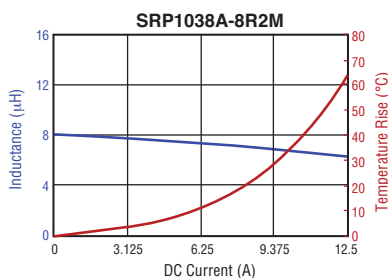
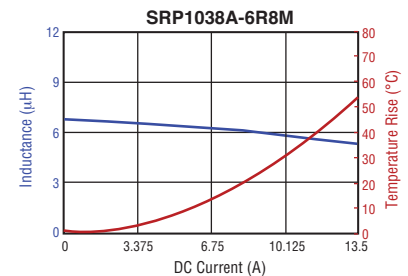
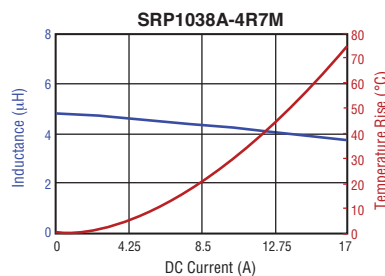
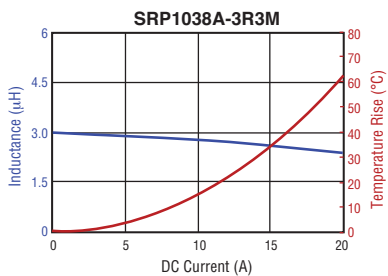
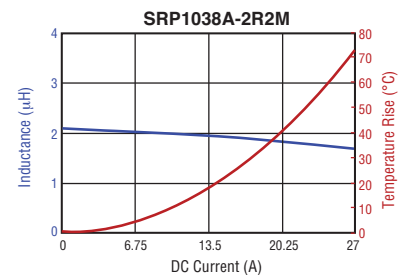
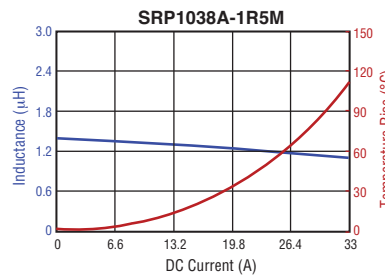
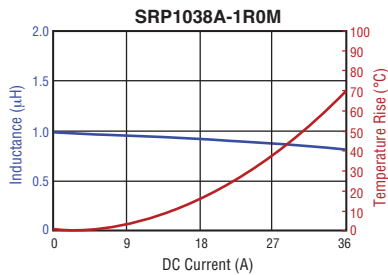
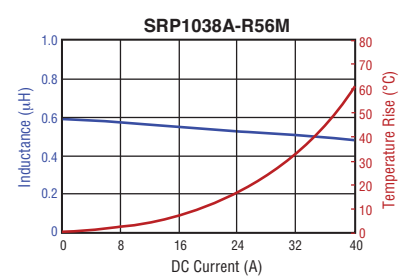
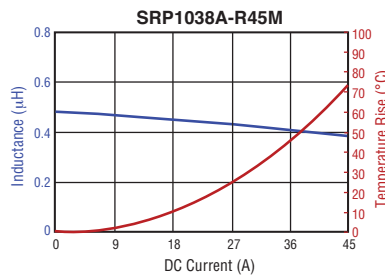
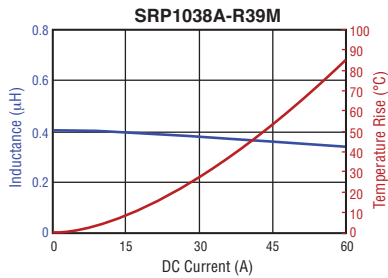
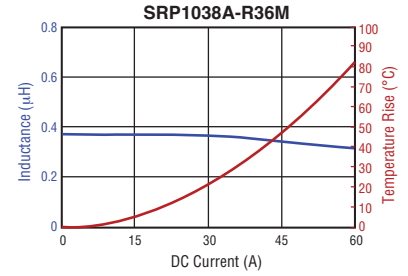
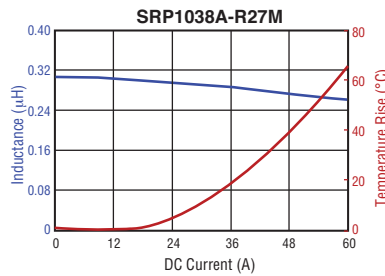
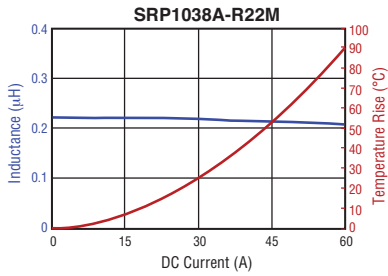
Specifications are subject to change without notice.

The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time. Users should verify actual device performance in their specific applications.

# SRP1038A Series - Shielded Power Inductors



## L vs. I Charts

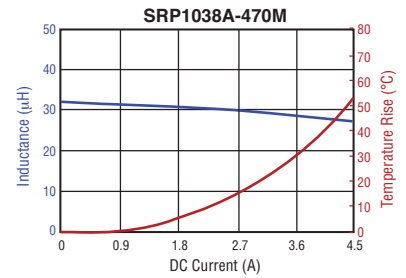
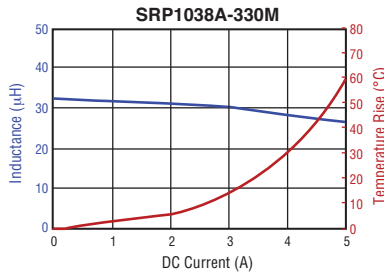
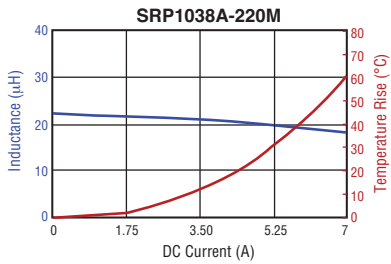


Specifications are subject to change without notice. The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time. Users should verify actual device performance in their specific applications.

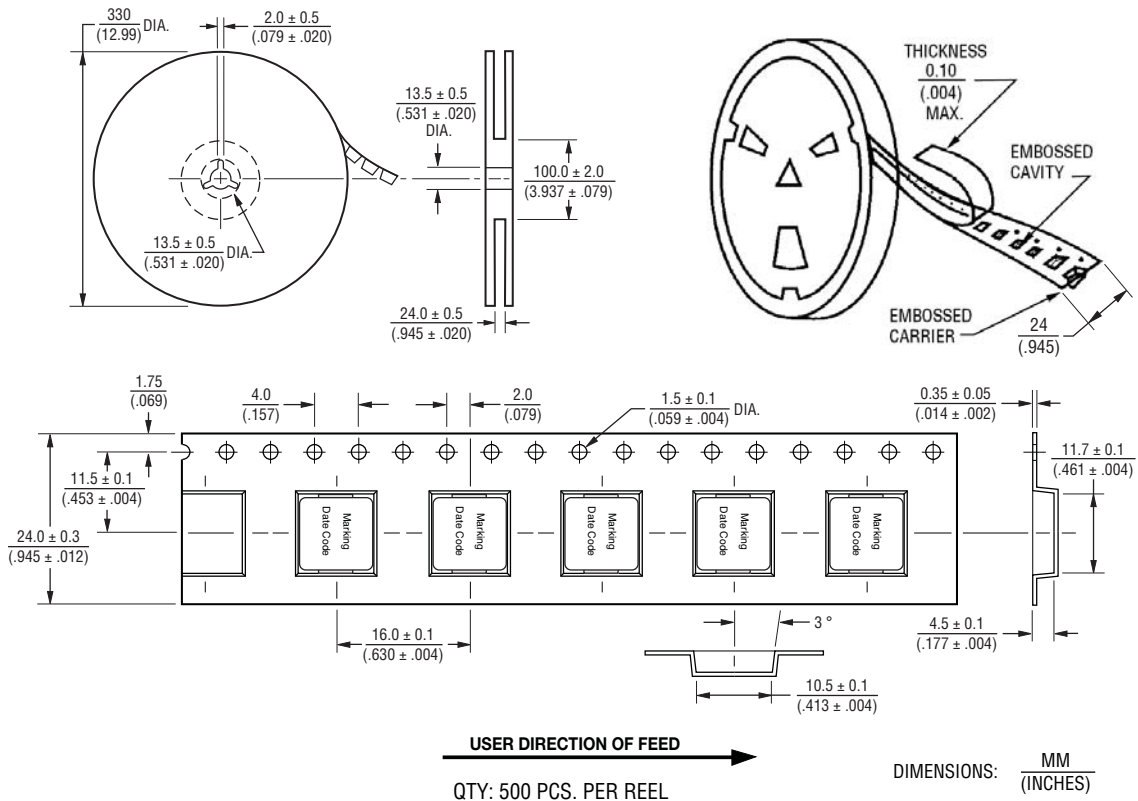
# SRP1038A Series - Shielded Power Inductors



## L vs. I Charts (Continued)



## Packaging Specifications



Asia-Pacific: Tel: +886-2 2562-4117 • Fax: +886-2 2562-4116

EMEA: Tel: +36 88 520 390 • Fax: +36 88 520 211

The Americas: Tel: +1-951 781-5500 • Fax: +1-951 781-5700

[www.bourns.com](http://www.bourns.com)