



## Features

- Shielded construction
- Inductance range: 1.0 to 100  $\mu$ H
- Heating current up to 5 A
- Dimensions: 6.7 x 6.7 x 4 mm
- AEC-Q200 qualified
- RoHS compliant\* and halogen free\*\*

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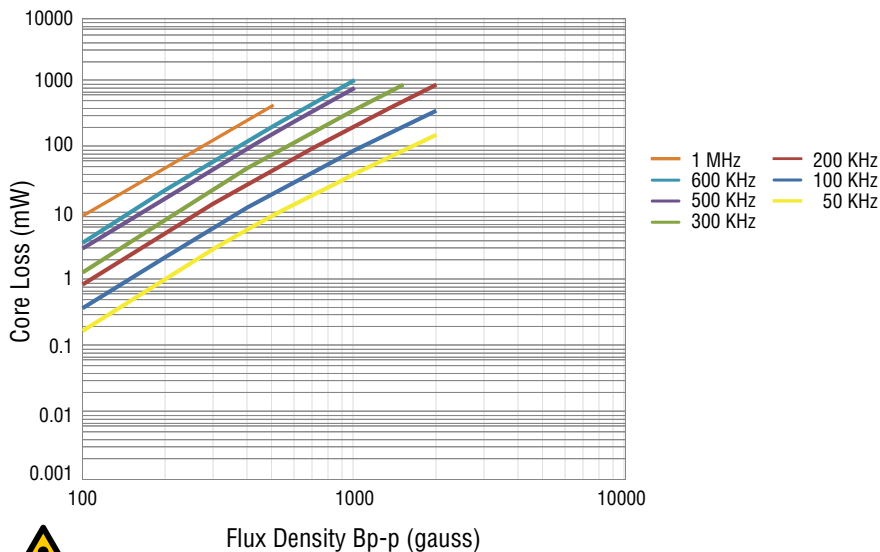
## SRR6040A Series - Shielded Power Inductors

### Electrical Specifications @ 25 °C

| Bourns Part Number | Inductance @ 10 kHz / 1 V |          | DCR ( $\Omega$ ) Typ. | DCR ( $\Omega$ ) Max. | I rms (A) | I sat (A) | ***K-Factor |
|--------------------|---------------------------|----------|-----------------------|-----------------------|-----------|-----------|-------------|
|                    | L ( $\mu$ H)              | Tol. (%) |                       |                       |           |           |             |
| SRR6040A-1R0Y      | 1.0                       | ± 30     | 0.0098                | 0.015                 | 5.0       | 5.55      | 388         |
| SRR6040A-3R0Y      | 3.0                       | ± 30     | 0.0153                | 0.021                 | 3.5       | 3.33      | 233         |
| SRR6040A-5R0Y      | 5.0                       | ± 30     | 0.0184                | 0.025                 | 2.9       | 2.63      | 184         |
| SRR6040A-6R8Y      | 6.8                       | ± 30     | 0.0223                | 0.03                  | 2.5       | 2.17      | 152         |
| SRR6040A-8R2Y      | 8.2                       | ± 30     | 0.0266                | 0.036                 | 2.3       | 2.0       | 140         |
| SRR6040A-100M      | 10                        | ± 20     | 0.0358                | 0.05                  | 2.0       | 1.72      | 120         |
| SRR6040A-120M      | 12                        | ± 20     | 0.0397                | 0.055                 | 1.7       | 1.61      | 113         |
| SRR6040A-150M      | 15                        | ± 20     | 0.0428                | 0.06                  | 1.6       | 1.51      | 106         |
| SRR6040A-180M      | 18                        | ± 20     | 0.0551                | 0.075                 | 1.5       | 1.35      | 94          |
| SRR6040A-220M      | 22                        | ± 20     | 0.0647                | 0.087                 | 1.3       | 1.22      | 85          |
| SRR6040A-270M      | 27                        | ± 20     | 0.0769                | 0.105                 | 1.2       | 1.11      | 78          |
| SRR6040A-330M      | 33                        | ± 20     | 0.0903                | 0.12                  | 1.1       | 1.02      | 71          |
| SRR6040A-390M      | 39                        | ± 20     | 0.103                 | 0.135                 | 1.0       | 0.94      | 66          |
| SRR6040A-470M      | 47                        | ± 20     | 0.123                 | 0.16                  | 0.95      | 0.85      | 59          |
| SRR6040A-560M      | 56                        | ± 20     | 0.149                 | 0.19                  | 0.86      | 0.77      | 54          |
| SRR6040A-680M      | 68                        | ± 20     | 0.187                 | 0.24                  | 0.75      | 0.7       | 49          |
| SRR6040A-820M      | 82                        | ± 20     | 0.22                  | 0.29                  | 0.7       | 0.63      | 44          |
| SRR6040A-101M      | 100                       | ± 20     | 0.266                 | 0.345                 | 0.65      | 0.57      | 40          |

\*\*\*K-Factor: To calculate core flux density, Bp-p (gauss) = K x L( $\mu$ H) x  $\Delta$ I (peak-to-peak ripple current, A), determine core loss from *Core Loss vs. Flux Density* plot.

### Core Loss vs. Flux Density



**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.  
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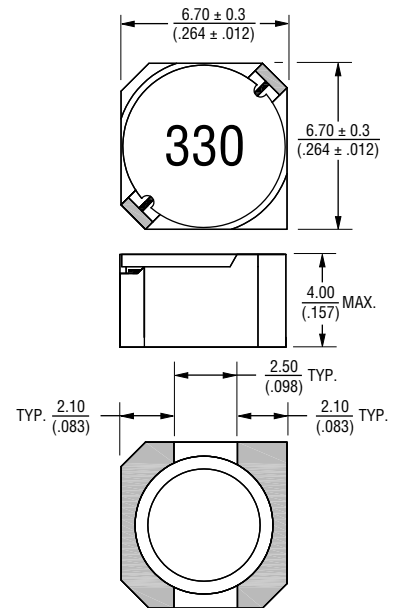
### General Specifications

Operating Temperature ..... -40 °C to +125 °C  
 (Temperature rise included)  
 Storage Temperature ..... -40 °C to +125 °C  
 Resistance to Solder Heat ..... +250°C for 10 sec.  
 Temperature Rise ..... 30 °C typ. at rated Irms  
 Inductance drop ..... 35 % at Isat

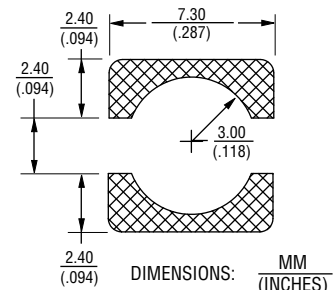
### Materials

Core ..... Ferrite  
 Wire ..... Enameled copper  
 Terminal Finish ..... Sn  
 Packaging ..... 1000 pcs. per reel

### Product Dimensions



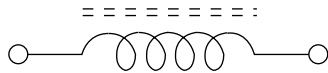
### Recommended Layout



# SRR6040A Series - Shielded Power Inductors

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## Electrical Schematic

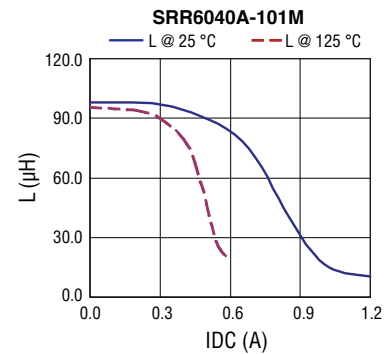
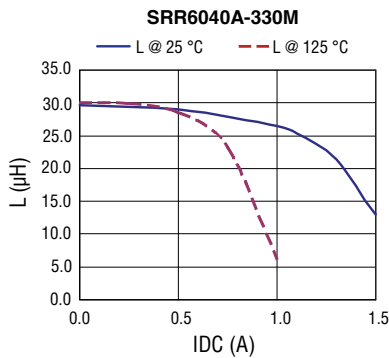
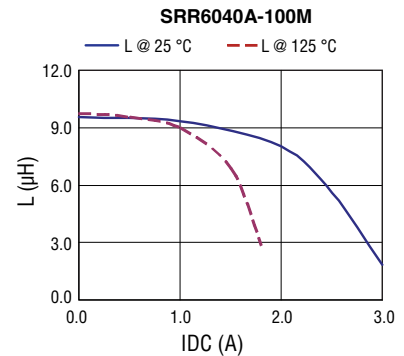
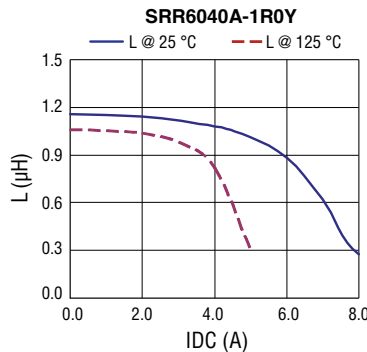


## How to Order

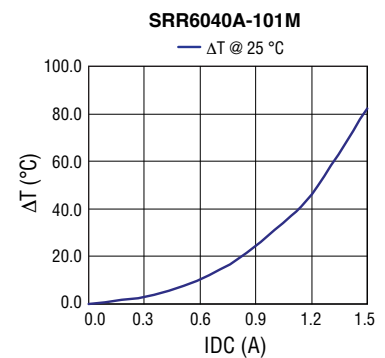
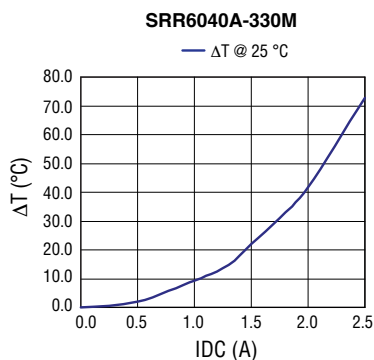
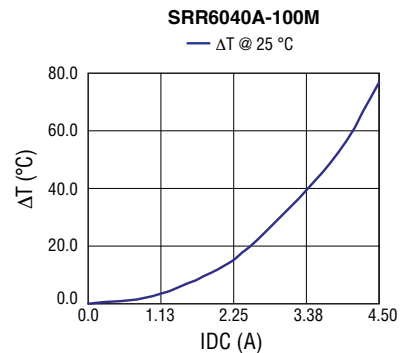
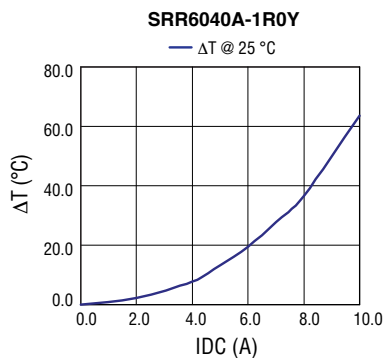
**SRR6040A - 100M**

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

## Inductance vs. IDC



## Temperature Rise vs. IDC



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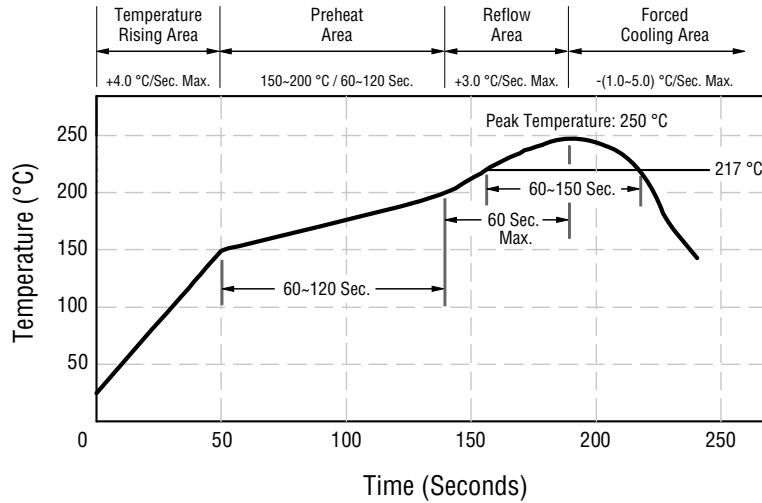
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# SRR6040A Series - Shielded Power Inductors

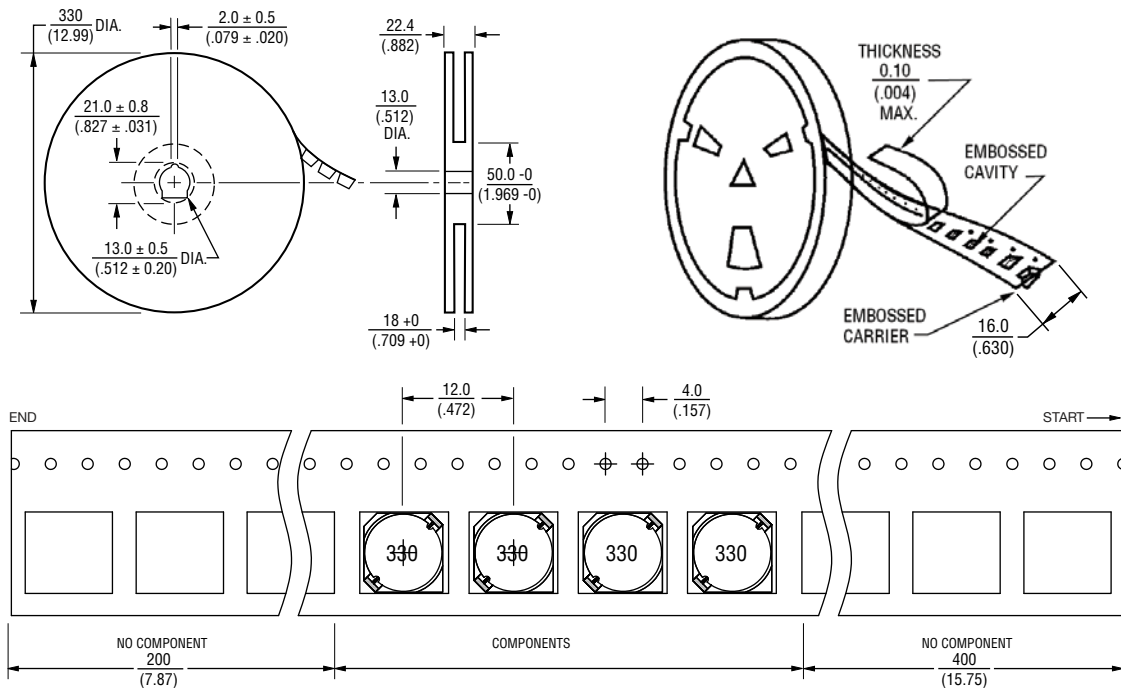
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## Soldering Profile



Peak Temperature: 250 °C max.  
 Max. Peak Temperature -5 °C: 30 sec. max.  
 Max. Time Above 217 °C: 60~150 sec. max.

## Packaging Specifications



USER DIRECTION OF FEED

QTY: 250 PCS. PER REEL

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

REV. 02/17

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