



**THE DATASHEET OF  
SRR0745A-390M**





### Features

- Shielded construction
- Inductance range: 10 to 1000  $\mu$ H
- Heating current up to 2.1 A
- Dimensions: 7.3 x 7.3 x 4.5 mm
- AEC-Q200 qualified
- RoHS compliant\* and halogen free\*\*



This series is currently available but not recommended for new designs. The [Model SRR0745HA Series](#) is the recommended replacement.

**BOURNS®**

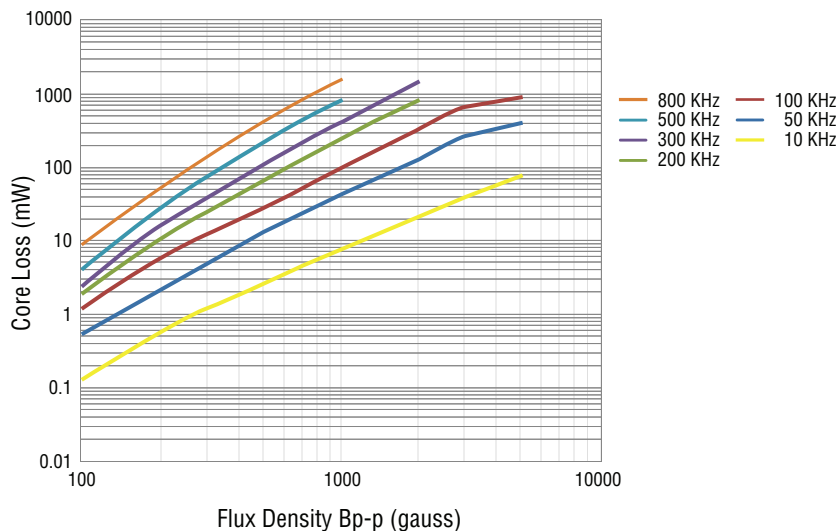
## SRR0745A Series - Shielded Power Inductors

### Electrical Specifications @ 25 °C

| Bourns Part Number | Inductance @ 1 kHz / 1 V |          | DCR ( $\Omega$ ) Max. | I rms (A) | I sat (A) | ***K-Factor |
|--------------------|--------------------------|----------|-----------------------|-----------|-----------|-------------|
|                    | L ( $\mu$ H)             | Tol. (%) |                       |           |           |             |
| SRR0745A-100M      | 10                       | $\pm 20$ | 0.052                 | 2.1       | 2.5       | 112         |
| SRR0745A-120M      | 12                       | $\pm 20$ | 0.062                 | 2.0       | 2.3       | 98          |
| SRR0745A-150M      | 15                       | $\pm 20$ | 0.075                 | 1.9       | 2.1       | 88          |
| SRR0745A-180M      | 18                       | $\pm 20$ | 0.09                  | 1.8       | 1.95      | 83          |
| SRR0745A-220M      | 22                       | $\pm 20$ | 0.096                 | 1.65      | 1.75      | 72          |
| SRR0745A-270M      | 27                       | $\pm 20$ | 0.13                  | 1.45      | 1.62      | 66          |
| SRR0745A-330M      | 33                       | $\pm 20$ | 0.15                  | 1.35      | 1.45      | 59          |
| SRR0745A-390M      | 39                       | $\pm 20$ | 0.19                  | 1.17      | 1.3       | 55          |
| SRR0745A-470M      | 47                       | $\pm 20$ | 0.21                  | 1.05      | 1.2       | 50          |
| SRR0745A-560M      | 56                       | $\pm 20$ | 0.24                  | 0.95      | 1.1       | 47          |
| SRR0745A-680M      | 68                       | $\pm 20$ | 0.3                   | 0.86      | 0.96      | 41          |
| SRR0745A-820M      | 82                       | $\pm 20$ | 0.4                   | 0.78      | 0.9       | 38          |
| SRR0745A-101M      | 100                      | $\pm 20$ | 0.45                  | 0.7       | 0.78      | 34          |
| SRR0745A-121M      | 120                      | $\pm 20$ | 0.55                  | 0.6       | 0.7       | 32          |
| SRR0745A-151M      | 150                      | $\pm 20$ | 0.76                  | 0.48      | 0.58      | 29          |
| SRR0745A-181M      | 180                      | $\pm 20$ | 0.82                  | 0.46      | 0.54      | 26          |
| SRR0745A-221M      | 220                      | $\pm 20$ | 0.95                  | 0.42      | 0.5       | 23          |
| SRR0745A-271M      | 270                      | $\pm 20$ | 1.2                   | 0.38      | 0.46      | 22          |
| SRR0745A-331M      | 330                      | $\pm 20$ | 1.5                   | 0.34      | 0.4       | 20          |
| SRR0745A-391M      | 390                      | $\pm 20$ | 1.85                  | 0.32      | 0.36      | 18          |
| SRR0745A-471M      | 470                      | $\pm 20$ | 2.2                   | 0.29      | 0.34      | 16          |
| SRR0745A-561M      | 560                      | $\pm 20$ | 2.6                   | 0.26      | 0.3       | 15          |
| SRR0745A-681M      | 680                      | $\pm 20$ | 2.8                   | 0.24      | 0.28      | 13          |
| SRR0745A-821M      | 820                      | $\pm 20$ | 3.5                   | 0.22      | 0.26      | 12          |
| SRR0745A-102M      | 1000                     | $\pm 20$ | 4.1                   | 0.2       | 0.24      | 11          |

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

### Core Loss vs. Flux Density



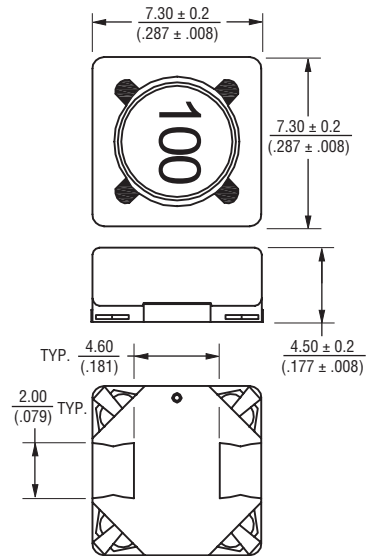
### General Specifications

Operating Temperature .....-40 °C to +125 °C  
 (Temperature rise included)  
 Storage Temperature .....-40 °C to +125 °C  
 Temperature Rise .....40 °C typ. at rated I rms  
 Inductance drop .....25 % at I sat

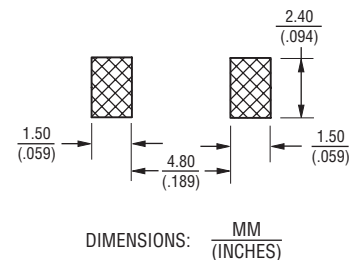
### Materials

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

### Product Dimensions



### 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. The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at [www.bourns.com/docs/legal/disclaimer.pdf](http://www.bourns.com/docs/legal/disclaimer.pdf).

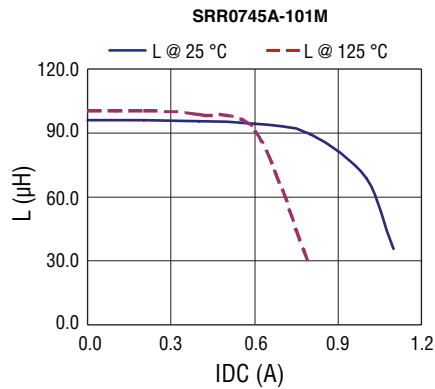
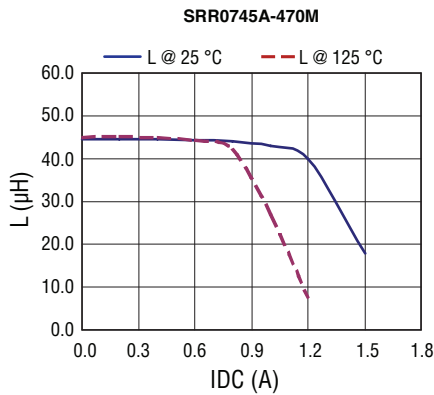


**WARNING**  
 Cancer and Reproductive Harm  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

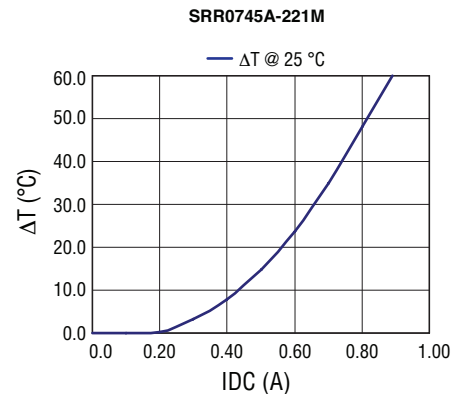
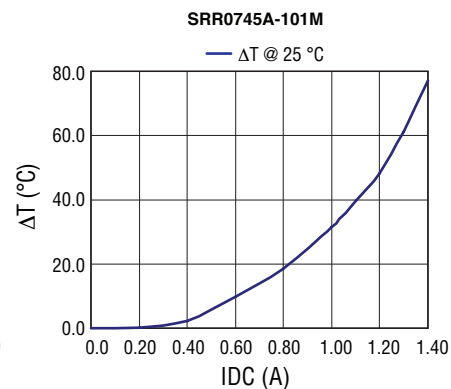
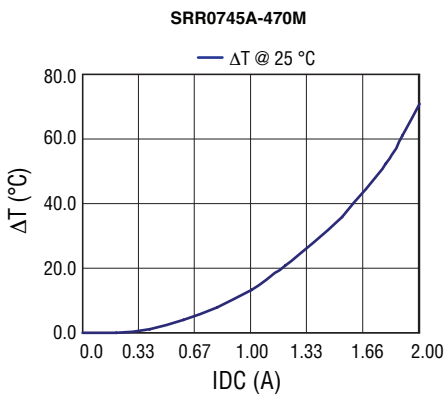
# SRR0745A Series - Shielded Power Inductors



## Inductance vs. IDC



## Temperature Rise vs. IDC



## How to Order

**SRR0745A - 100M**

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

## Electrical Schematic



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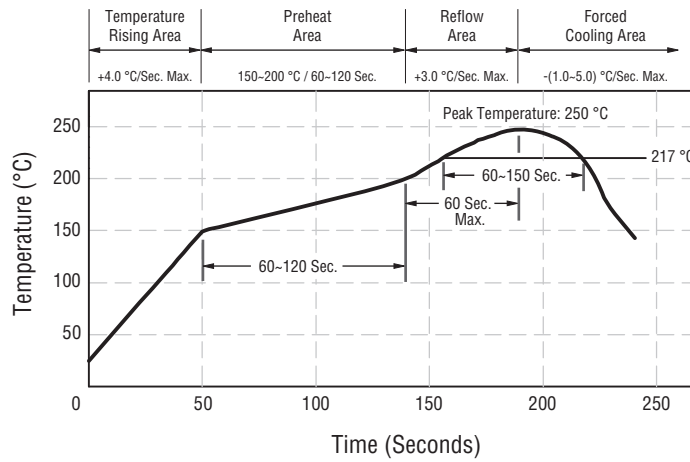
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# SRR0745A Series - Shielded Power Inductors

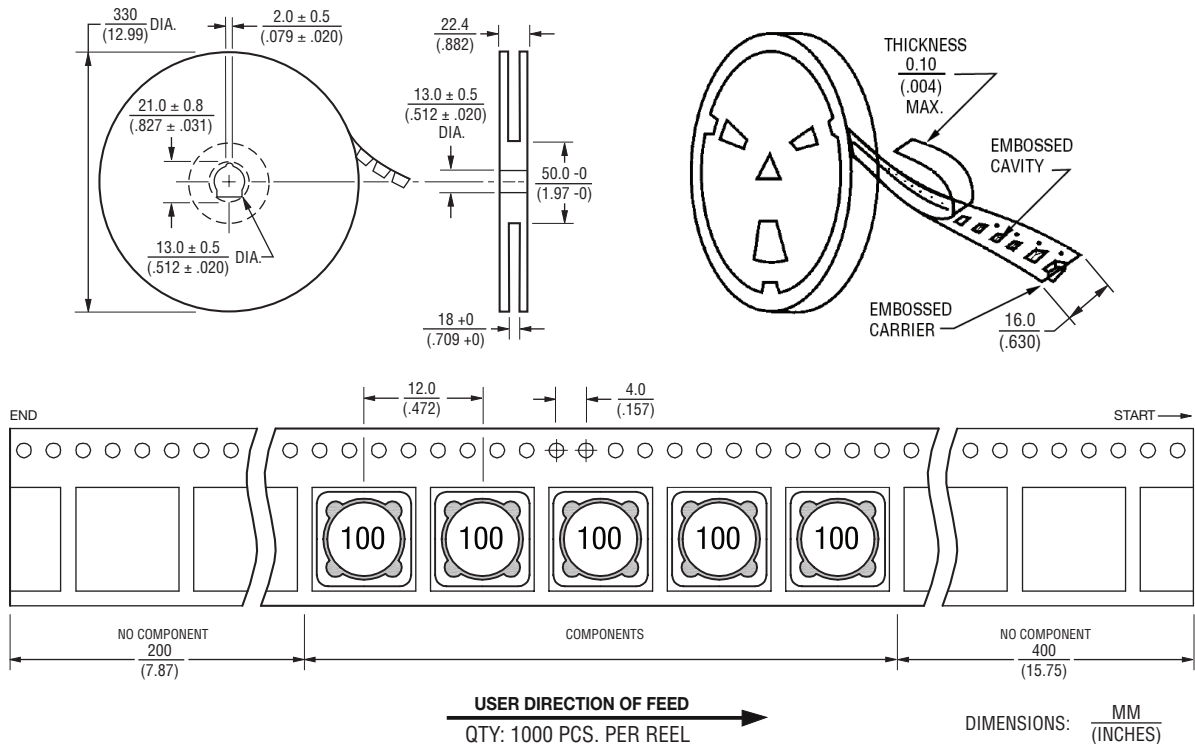
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## Soldering Profile

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



## Packaging Specifications



REV. 01/24

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Users should verify actual device performance in their specific applications.

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