



## 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.

## 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          |

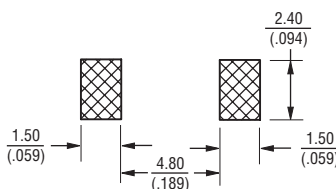
\*\*\*K-Factor: To calculate core flux density,  $B_p$ -p (gauss) =  $K \times L(\mu H) \times \Delta I$  (peak-to-peak ripple current, A), determine core loss from *Core Loss vs. Flux Density* plot.

### How to Order

**SRR0745A - 100M**

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

### Recommended Layout



### Additional Information

Click these links for more information:



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[SAMPLES](#)



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### 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<sub>rms</sub>

Inductance Drop ..... 25 % at I<sub>sat</sub>

### Materials

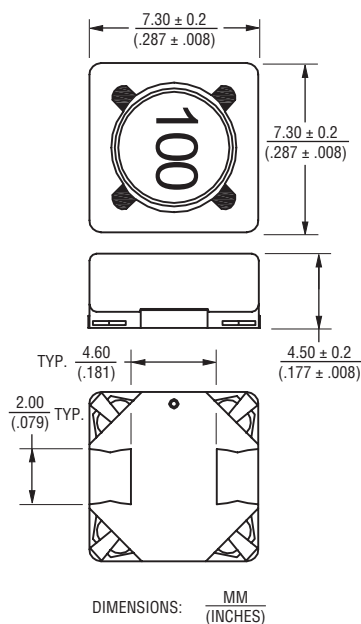
Core ..... Ferrite

Wire ..... Enameled copper

Terminal Finish ..... Sn

Packaging ..... 1000 pcs. per reel

### Product Dimensions



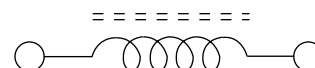
**CALIFORNIA WARNING:** Can expose you to lead, a carcinogen and reproductive toxicant. See [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

\* 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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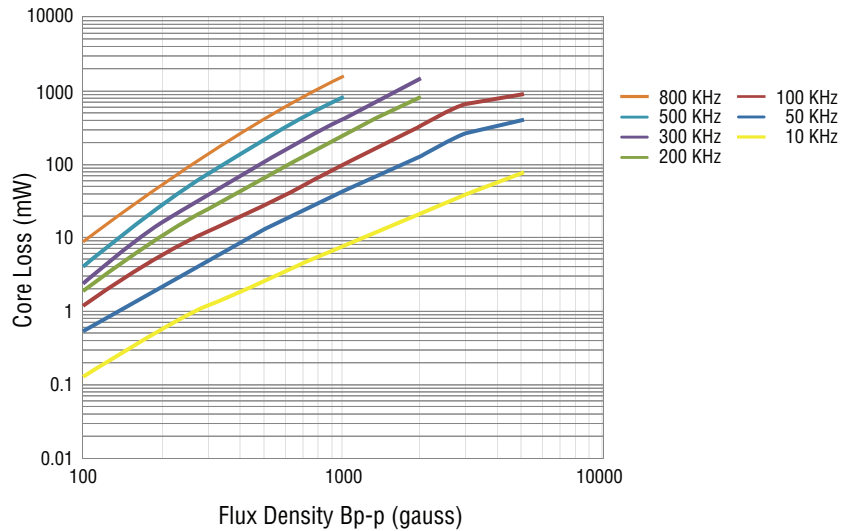
### Electrical Schematic



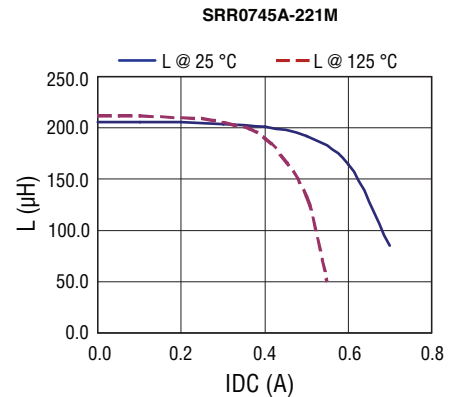
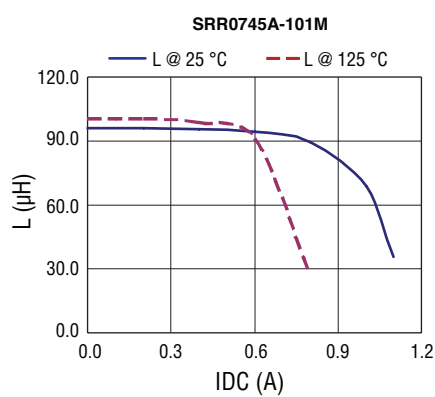
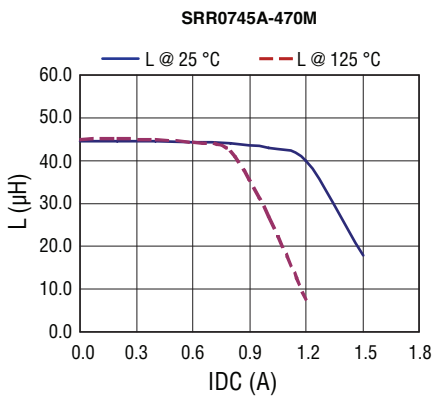
## SRR0745A Series – Shielded Power Inductors

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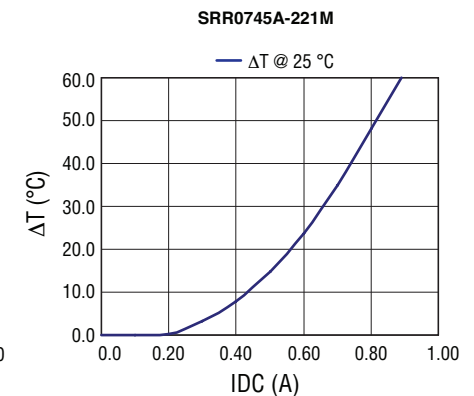
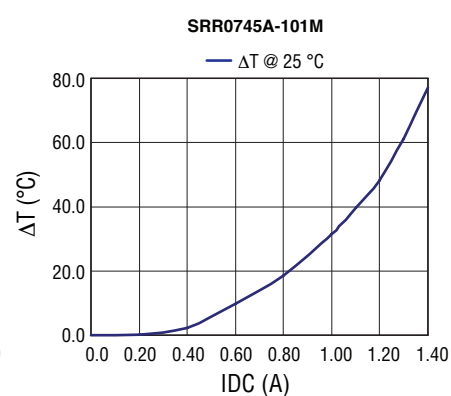
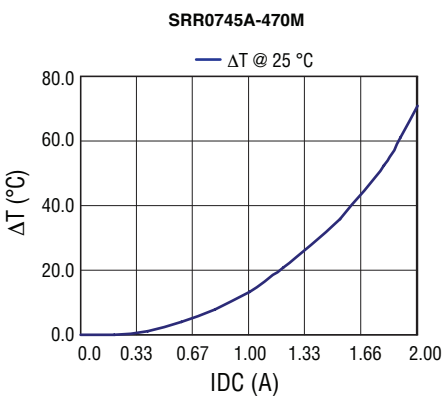
### Core Loss vs. Flux Density



### Inductance vs. IDC



### Temperature Rise vs. IDC



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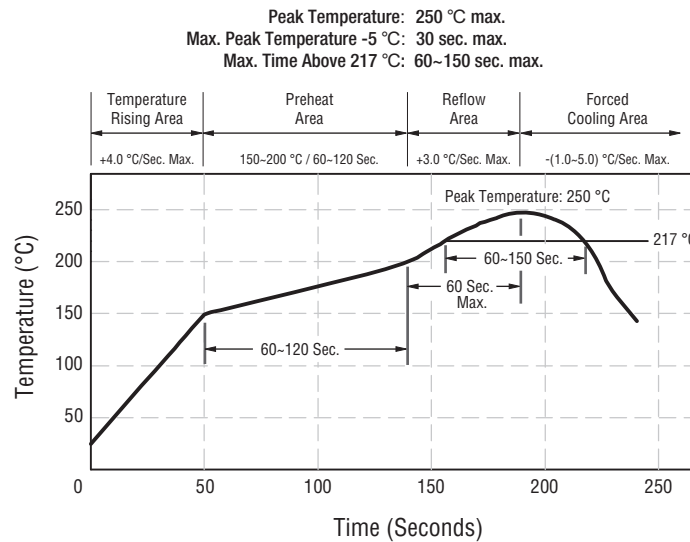
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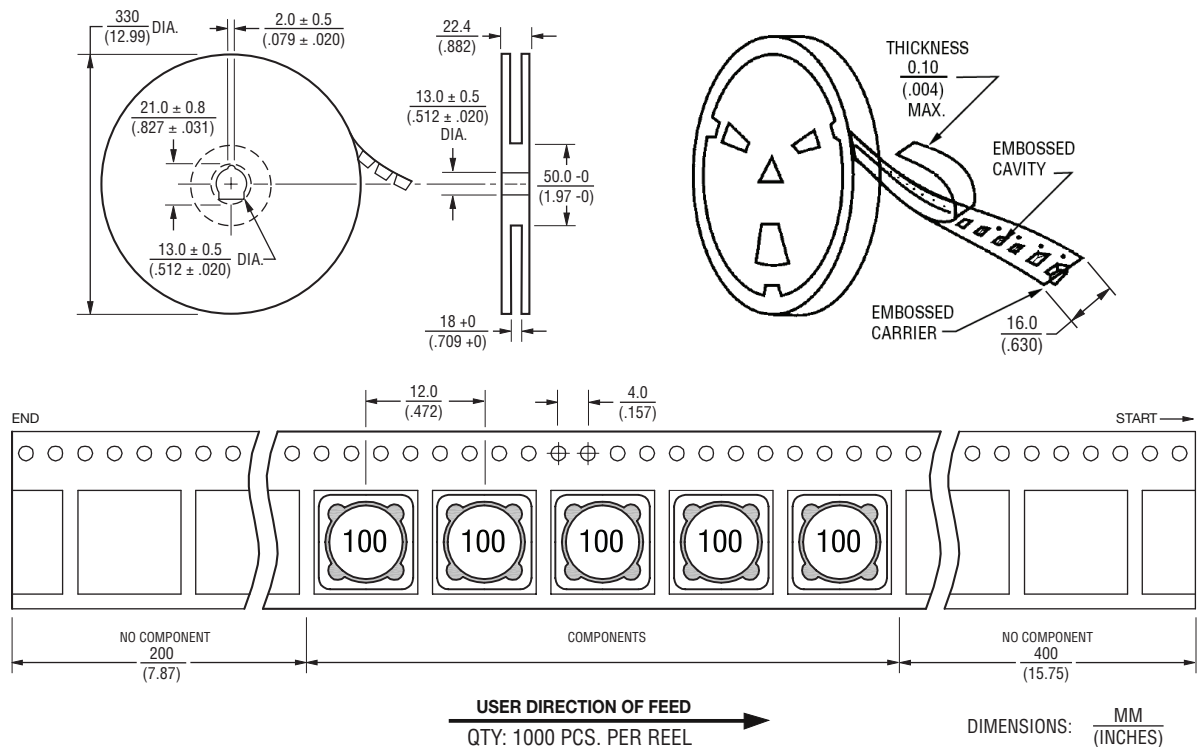
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### Soldering Profile



### Packaging Specifications



REV. 11/25

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