



## Features

- Shielded construction
- Inductance range: 3.5 to 100  $\mu\text{H}$
- Rated current up to 5 A
- AEC-Q200 qualified
- RoHS compliant\* and halogen free\*\*

## Applications

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

# SRU8045A Series - Shielded Power Inductors

## Electrical Specifications @ 25 °C

| Bourns Part Number | Inductance @ 100 kHz / 0.1 V |          | Q (Ref.) | Test Freq. (MHz) | SRF (MHz) Typ. | DCR ( $\Omega$ ) |        | I rms (A) | I sat (A) |
|--------------------|------------------------------|----------|----------|------------------|----------------|------------------|--------|-----------|-----------|
|                    | L ( $\mu\text{H}$ )          | Tol. (%) |          |                  |                | Typ.             | Max.   |           |           |
| SRU8045A-3R5Y      | 3.5                          | $\pm 30$ | 12       | 7.96             | 45             | 0.0188           | 0.025  | 5.00      | 5.00      |
| SRU8045A-4R7Y      | 4.7                          | $\pm 30$ | 10       | 7.96             | 30             | 0.022            | 0.0275 | 4.60      | 4.40      |
| SRU8045A-6R2Y      | 6.2                          | $\pm 30$ | 10       | 7.96             | 23             | 0.0285           | 0.036  | 4.20      | 3.80      |
| SRU8045A-100Y      | 10                           | $\pm 30$ | 16       | 2.52             | 18             | 0.035            | 0.048  | 3.50      | 3.30      |
| SRU8045A-220Y      | 22                           | $\pm 30$ | 18       | 2.52             | 12             | 0.094            | 0.122  | 2.25      | 2.15      |
| SRU8045A-330Y      | 33                           | $\pm 30$ | 14       | 2.52             | 8              | 0.118            | 0.15   | 2.00      | 1.80      |
| SRU8045A-470Y      | 47                           | $\pm 30$ | 12       | 2.52             | 6              | 0.215            | 0.27   | 1.45      | 1.40      |
| SRU8045A-680Y      | 68                           | $\pm 30$ | 8        | 2.52             | 4              | 0.32             | 0.40   | 1.25      | 1.20      |
| SRU8045A-101Y      | 100                          | $\pm 30$ | 20       | 0.796            | 3              | 0.40             | 0.50   | 1.00      | 0.92      |

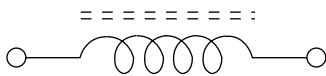
## General Specifications

Operating Temp. .... -40 °C to +125 °C  
 (Temperature rise included)  
 Storage Temperature ... -40 °C to +125 °C  
 Temperature Rise ..... 40 °C at rated I rms  
 Rated Current  
 ..... Inductance drops 35 % at I sat  
 Failure In Time (FIT) ..... 24.7/10<sup>9</sup> hours  
 Mean Time Between Failures (MTBF)  
 ..... 40.4 x 10<sup>6</sup> hours

## Materials

Core ..... Ferrite  
 Wire ..... Enameled copper  
 Terminal Finish ..... Sn  
 Packaging ..... 1000 pcs. per 13-inch reel

## Electrical Schematic

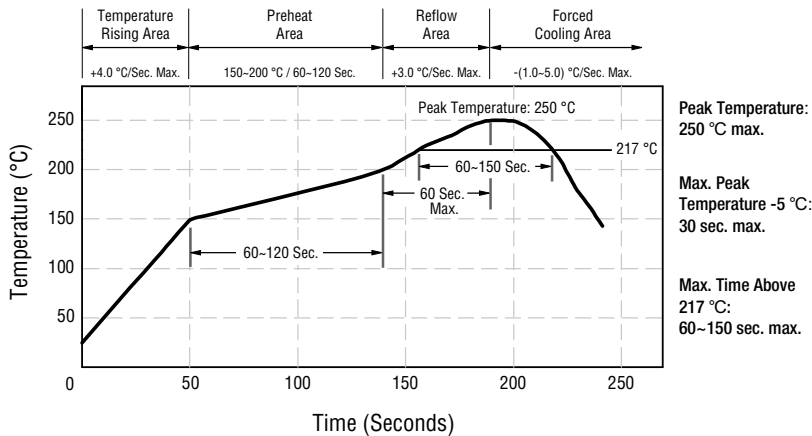


## How to Order

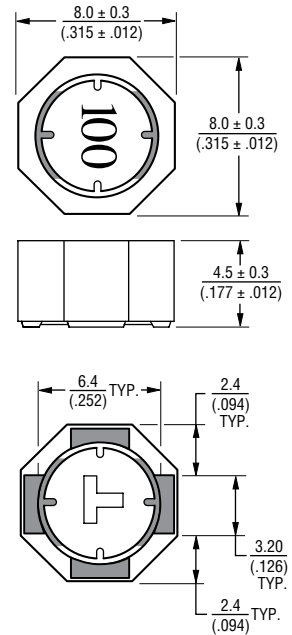
SRU8045A - 100Y

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

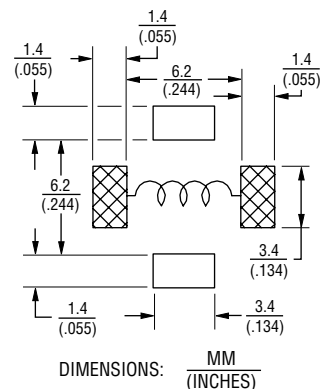
## Soldering Profile



## Product Dimensions



## Recommended Layout



\*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. Specifications are subject to change without notice.

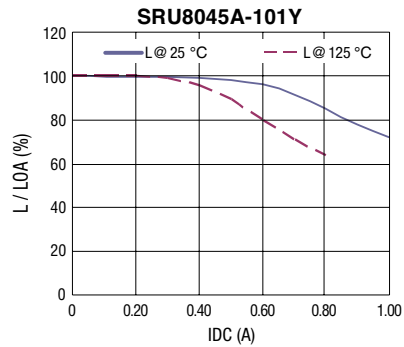
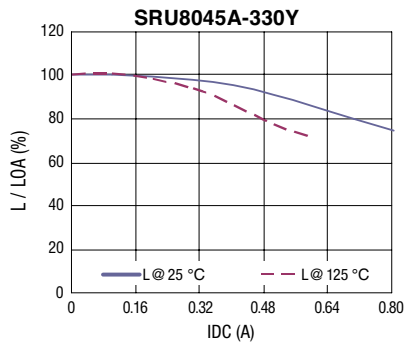
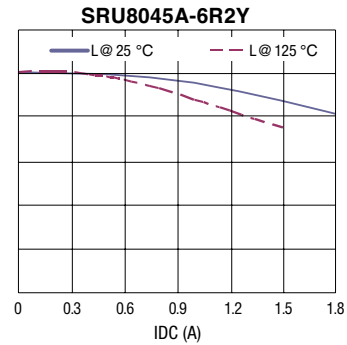
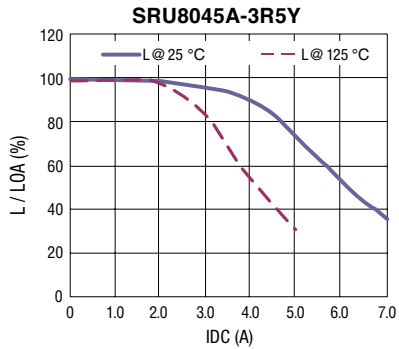
The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.

Users should verify actual device performance in their specific applications.

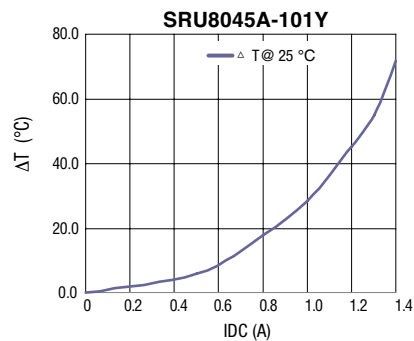
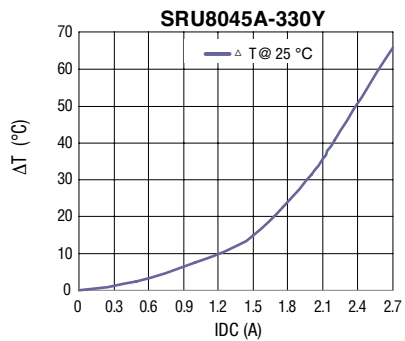
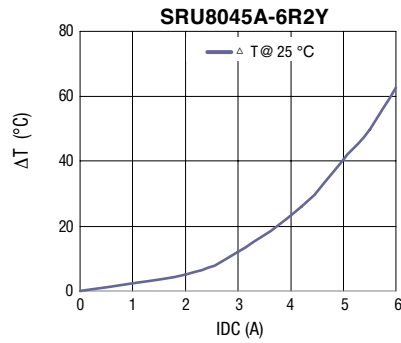
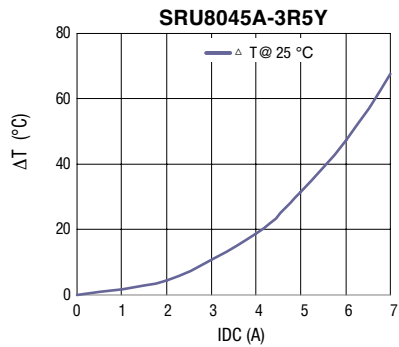
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## Inductance vs. IDC



## Temperature vs. IDC

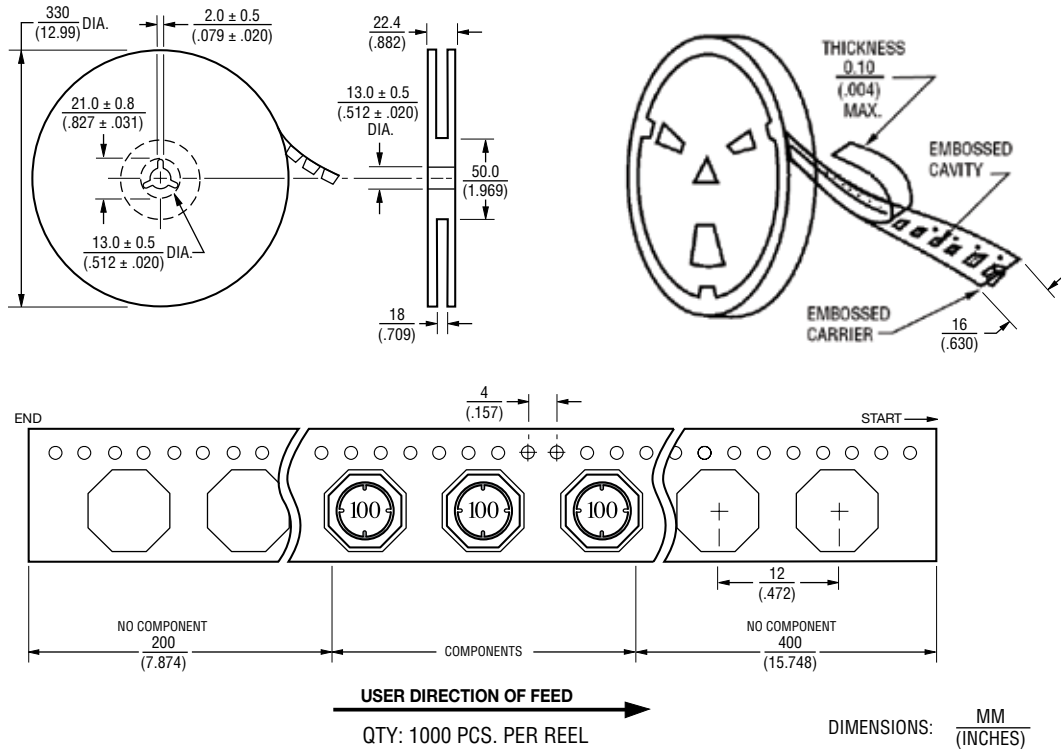


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## Packaging Specifications



07/16

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