



## Features

- Available in E6 series
- Unit height of 3.8 mm
- Current up to 7.2 A
- RoHS compliant\*

## Applications

- Input/output of DC-DC converters
- Power supplies for:
  - Portable communication equipment
  - Camcorders
  - LCD TVs

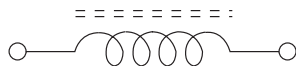
## SRU1038 Series – Shielded SMD Power Inductors

### Electrical Specifications

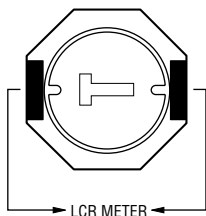
| Bourns Part No. | Inductance 100 KHz |        | Q Ref. | Test Freq. (MHz) | SRF Typ. (MHz) | RDC Max. (mΩ) | Irms Max. (A) | Isat Typ. (A) | **K-Factor |
|-----------------|--------------------|--------|--------|------------------|----------------|---------------|---------------|---------------|------------|
|                 | (μH)               | Tol. % |        |                  |                |               |               |               |            |
| SRU1038-1R5Y    | 1.5                | ±30    | 14     | 7.96             | 65.0           | 7.5           | 7.20          | 7.00          | 177        |
| SRU1038-2R2Y    | 2.2                | ±30    | 12     | 7.96             | 55.0           | 10.5          | 6.80          | 6.50          | 145        |
| SRU1038-2R5Y    | 2.5                | ±30    | 12     | 7.96             | 50.0           | 12.5          | 6.10          | 6.00          | 136        |
| SRU1038-3R5Y    | 3.5                | ±30    | 14     | 7.96             | 35.0           | 15.0          | 5.50          | 5.50          | 106        |
| SRU1038-3R8Y    | 3.8                | ±30    | 14     | 7.96             | 35.0           | 15.0          | 5.50          | 5.50          | 104        |
| SRU1038-5R0Y    | 5.0                | ±30    | 12     | 7.96             | 30.0           | 22.0          | 4.60          | 4.80          | 94         |
| SRU1038-5R2Y    | 5.2                | ±30    | 12     | 7.96             | 30.0           | 22.0          | 4.60          | 4.80          | 92         |
| SRU1038-6R2Y    | 6.2                | ±30    | 12     | 7.96             | 25.0           | 24.0          | 4.00          | 4.20          | 84         |
| SRU1038-6R8Y    | 6.8                | ±30    | 13     | 7.96             | 36.0           | 35.0          | 3.90          | 4.00          | 80         |
| SRU1038-8R2Y    | 8.2                | ±30    | 12     | 7.96             | 22.0           | 32.0          | 3.80          | 3.90          | 73         |
| SRU1038-100Y    | 10.0               | ±30    | 24     | 2.52             | 20.0           | 35.0          | 3.80          | 3.60          | 64         |
| SRU1038-150Y    | 15.0               | ±30    | 24     | 2.52             | 16.0           | 50.0          | 2.80          | 2.70          | 51         |
| SRU1038-220Y    | 22.0               | ±30    | 20     | 2.52             | 12.0           | 75.0          | 2.20          | 2.30          | 43         |
| SRU1038-270Y    | 27.0               | ±30    | 22     | 2.52             | 11.0           | 100.0         | 2.20          | 2.30          | 39         |
| SRU1038-330Y    | 33.0               | ±30    | 22     | 2.52             | 10.0           | 112.0         | 1.85          | 1.90          | 35         |
| SRU1038-470Y    | 47.0               | ±30    | 22     | 2.52             | 8.0            | 160.0         | 1.65          | 1.60          | 29         |
| SRU1038-680Y    | 68.0               | ±30    | 24     | 2.52             | 7.0            | 216.0         | 1.30          | 1.30          | 26         |
| SRU1038-101Y    | 100.0              | ±30    | 24     | 0.796            | 6.0            | 300.0         | 1.10          | 1.10          | 20         |
| SRU1038-151Y    | 150.0              | ±30    | 20     | 0.796            | 5.0            | 476.0         | 0.90          | 0.80          | 16         |
| SRU1038-221Y    | 220.0              | ±30    | 22     | 0.796            | 4.0            | 740.0         | 0.65          | 0.65          | 14         |
| SRU1038-331Y    | 330.0              | ±30    | 20     | 0.796            | 3.0            | 1000.0        | 0.55          | 0.52          | 11         |

\*\*K-Factor: To calculate core flux density, Bp-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 on page 2.

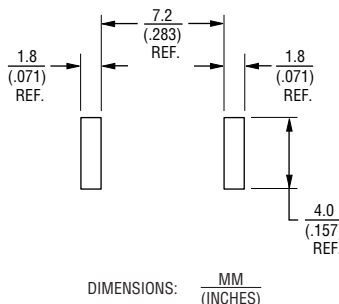
### Electrical Schematic



### Inductor Connection



### Recommended Layout



### Additional Information

Click these links for more information:



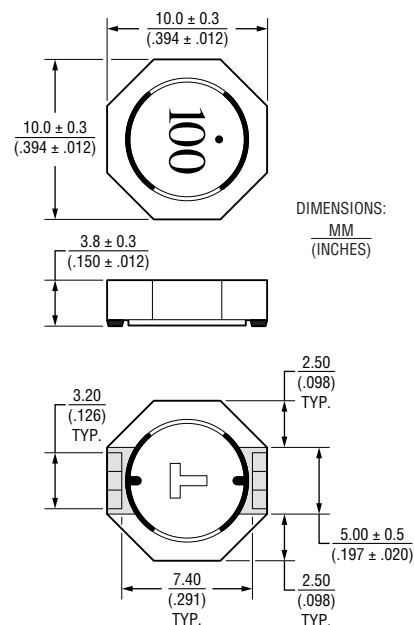
### General Specifications

Test Voltage ..... 1 V  
 Operating Temperature ..... -40 °C to +125 °C  
 (Temperature rise included)  
 Storage Temperature ..... -40 °C to +125 °C  
 Rated Current ..... Ind. drop 35 % typ. at Isat  
 Temperature Rise ..... 40 °C max. at rated Irms  
 Moisture Sensitivity Level ..... 1  
 ESD Classification (HBM) ..... N/A

### Materials

Core ..... Ferrite DR and RI core  
 Wire ..... Enameled copper  
 Terminal Finish ..... SnAgCu  
 Packaging ..... 800 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.

Specifications are subject to change without notice.

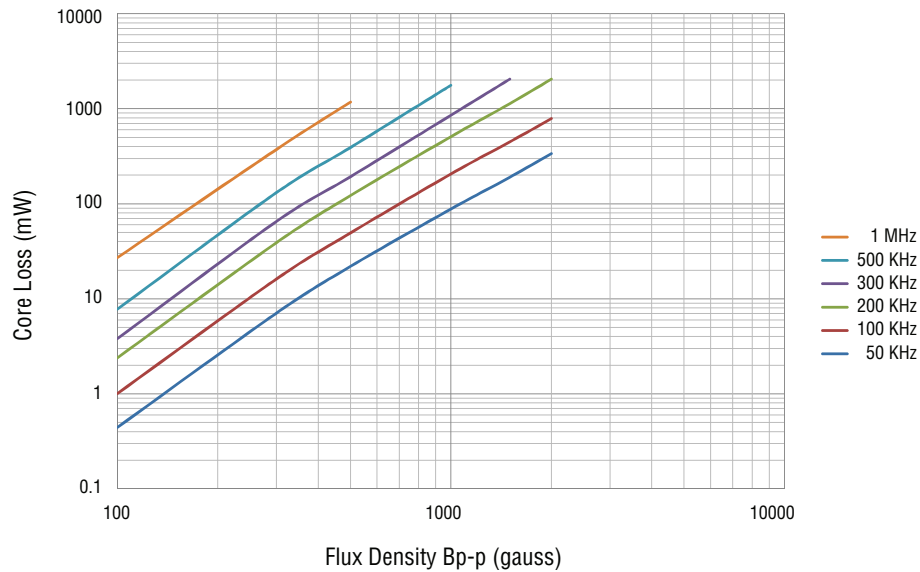
Users should verify actual device performance in their specific applications.

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## SRU1038 Series – Shielded SMD Power Inductors

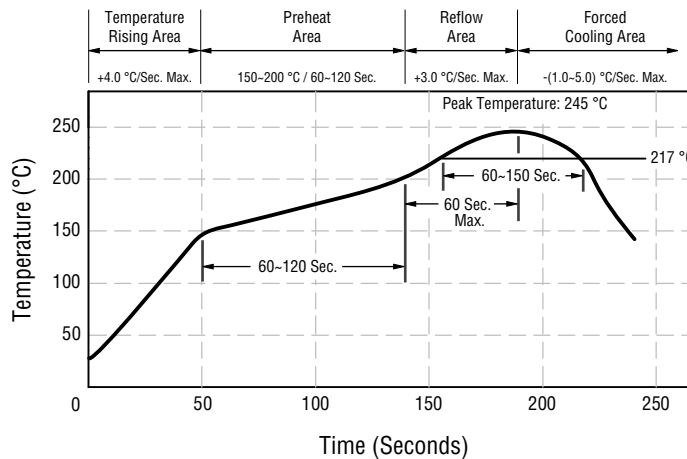
**BOURNS®**

### Core Loss vs. Flux Density



### Soldering Profile

Peak Temperature: 245 °C max.  
 Max. Peak Temperature -5 °C: 30 sec. max.  
 Max. Time Above 217 °C: 60~150 sec. max.



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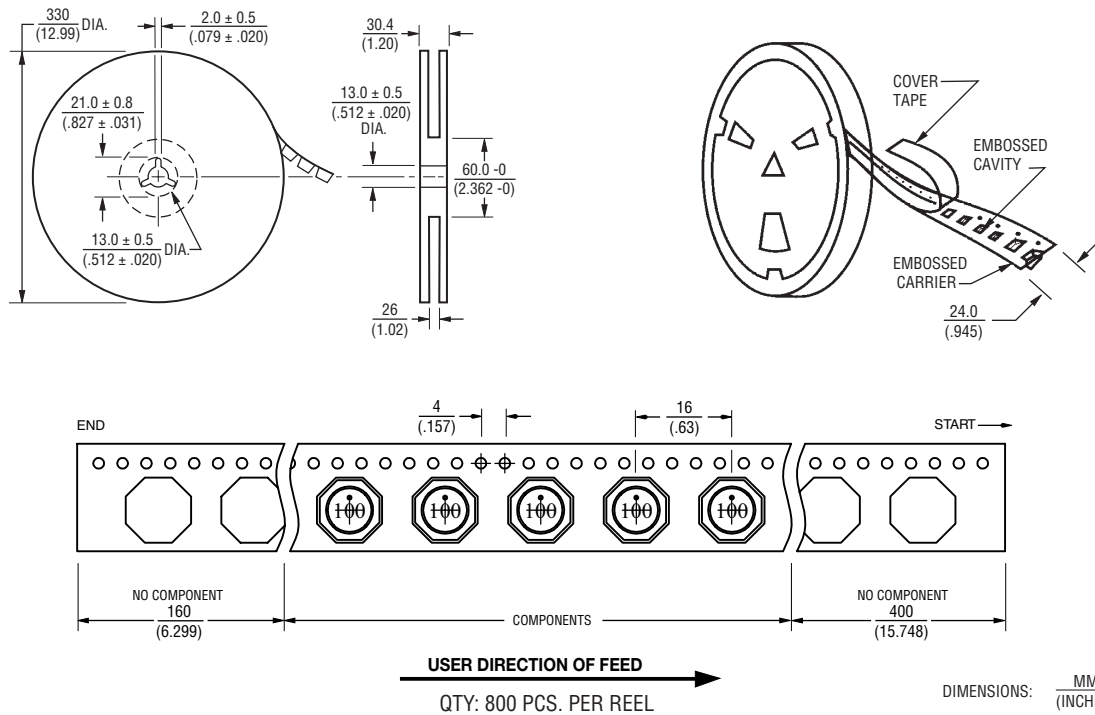
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# SRU1038 Series – Shielded SMD Power Inductors

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## Packaging Specifications



REV. 02/26

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