



## 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
  - Car radios

# SRU1038 Series - Shielded SMD Power Inductors

## Electrical Specifications

| Bourns Part No. | Inductance 100 KHz |        | Q Ref. | Test Frequency (MHz) | SRF Typ. (MHz) | RDC (mΩ) | I <sub>rms</sub> Max. (A) | I <sub>sat</sub> Typ. (A) |
|-----------------|--------------------|--------|--------|----------------------|----------------|----------|---------------------------|---------------------------|
|                 | (μH)               | Tol. % |        |                      |                |          |                           |                           |
| SRU1038-1R5Y    | 1.5                | ± 30   | 14     | 7.96                 | 65.0           | 5.2      | 7.20                      | 7.00                      |
| SRU1038-2R2Y    | 2.2                | ± 30   | 12     | 7.96                 | 55.0           | 7.7      | 6.80                      | 6.50                      |
| SRU1038-2R5Y    | 2.5                | ± 30   | 12     | 7.96                 | 50.0           | 12.5     | 6.10                      | 6.00                      |
| SRU1038-3R5Y    | 3.5                | ± 30   | 14     | 7.96                 | 24.0           | 11.5     | 5.50                      | 5.50                      |
| SRU1038-3R8Y    | 3.8                | ± 30   | 14     | 7.96                 | 35.0           | 15.0     | 5.50                      | 5.50                      |
| SRU1038-5R0Y    | 5.0                | ± 30   | 12     | 7.96                 | 30.0           | 14.5     | 4.60                      | 4.80                      |
| SRU1038-5R2Y    | 5.2                | ± 30   | 12     | 7.96                 | 30.0           | 22.0     | 4.60                      | 4.80                      |
| SRU1038-6R2Y    | 6.2                | ± 30   | 12     | 7.96                 | 25.0           | 16.5     | 4.00                      | 4.20                      |
| SRU1038-6R8Y    | 6.8                | ± 30   | 13     | 7.96                 | 36.0           | 35.0     | 3.90                      | 4.00                      |
| SRU1038-8R2Y    | 8.2                | ± 30   | 12     | 7.96                 | 22.0           | 32.0     | 3.80                      | 3.90                      |
| SRU1038-100Y    | 10.0               | ± 30   | 24     | 7.96                 | 20.0           | 25.0     | 3.80                      | 3.60                      |
| SRU1038-150Y    | 15.0               | ± 30   | 24     | 2.52                 | 16.0           | 37.0     | 2.80                      | 2.70                      |
| SRU1038-220Y    | 22.0               | ± 30   | 20     | 2.52                 | 12.0           | 55.8     | 2.20                      | 2.30                      |
| SRU1038-270Y    | 27.0               | ± 30   | 22     | 2.52                 | 11.0           | 78.0     | 1.85                      | 1.90                      |
| SRU1038-330Y    | 33.0               | ± 30   | 22     | 2.52                 | 10.0           | 86.0     | 1.80                      | 1.80                      |
| SRU1038-470Y    | 47.0               | ± 30   | 22     | 2.52                 | 8.0            | 121.0    | 1.65                      | 1.60                      |
| SRU1038-680Y    | 68.0               | ± 30   | 24     | 2.52                 | 7.0            | 166.0    | 1.10                      | 1.30                      |
| SRU1038-101Y    | 100.0              | ± 30   | 24     | 0.796                | 6.0            | 220.0    | 1.30                      | 1.10                      |
| SRU1038-151Y    | 150.0              | ± 30   | 20     | 0.796                | 5.0            | 358.0    | 0.90                      | 0.80                      |
| SRU1038-221Y    | 220.0              | ± 30   | 22     | 0.796                | 4.0            | 565.0    | 0.65                      | 0.65                      |
| SRU1038-331Y    | 330.0              | ± 30   | 20     | 0.796                | 3.0            | 773.0    | 0.55                      | 0.52                      |

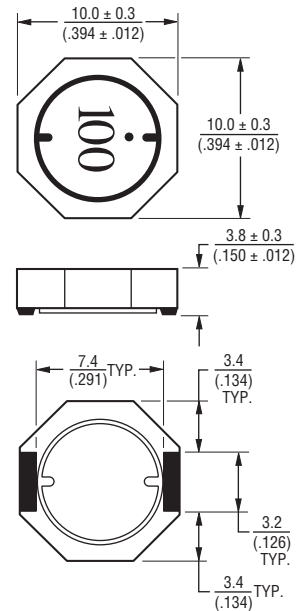
## General Specifications

Test Voltage ..... 1 V  
 Reflow Soldering .. 230 °C, 50 sec. max.  
 Operating Temperature ..... -40 °C to +125 °C  
 (Temperature rise included)  
 Storage Temperature ..... -40 °C to +125 °C  
 Rated Current ..... Ind. drop 35 % typ. at I<sub>sat</sub>  
 Temperature Rise ..... 40 °C max. at rated I<sub>rms</sub>  
 Resistance to Soldering Heat ..... 260 °C for 10 sec.

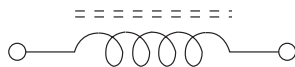
## Materials

Core ..... Ferrite DR and RI core  
 Wire ..... Enameled copper  
 Terminal ..... Ag/Ni/Sn  
 Packaging ..... 800 pcs. per reel

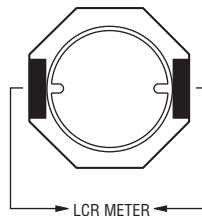
## Product Dimensions



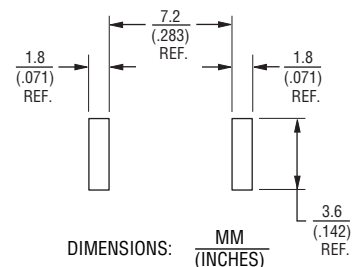
## Electrical Schematic



## Inductor Connection



## Recommended Layout

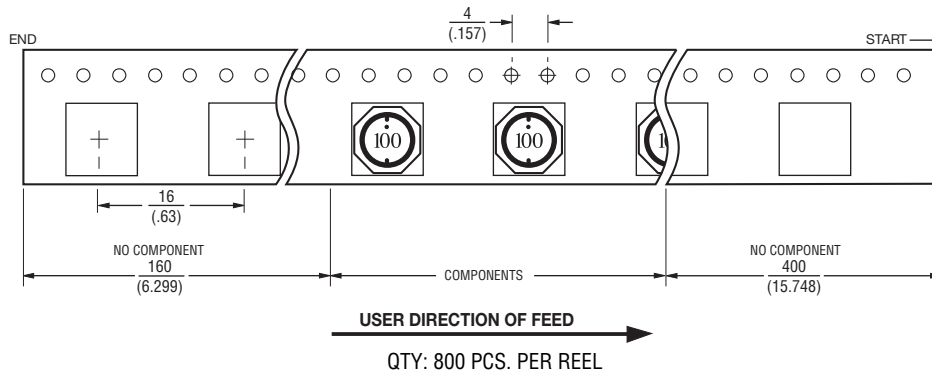
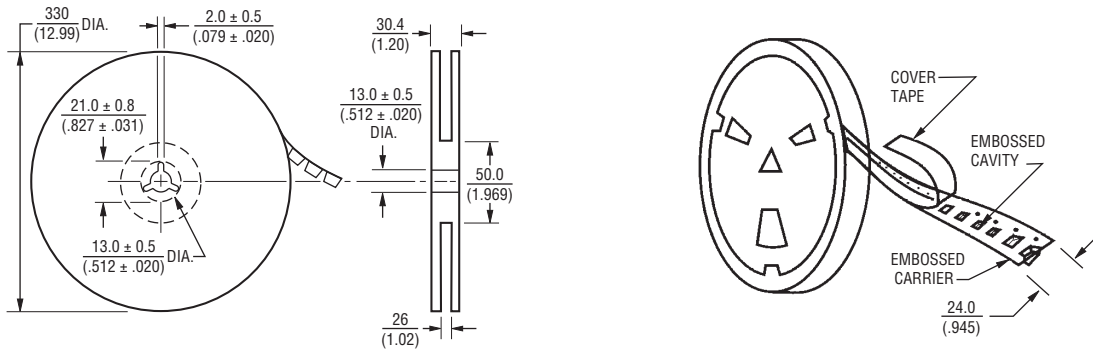


\* RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011. Specifications are subject to change without notice. Customers should verify actual device performance in their specific applications.

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**BOURNS®**

## Packaging Specifications



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

REV. 10/12

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