



## Features

- Available in E6 series
- Unit height of 2.8 mm
- Current up to 7 A
- RoHS compliant\*

## Applications

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

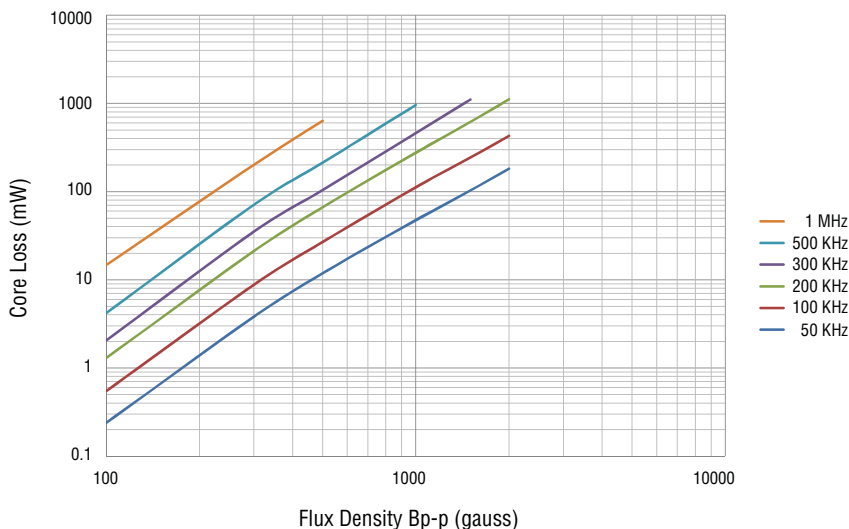
## SRU1028 Series - Shielded SMD Power Inductors

### Electrical Specifications @ 25 °C

| Bourns<br>Part Number | Inductance<br>@ 100 KHz |             | Q<br>Ref. | Test<br>Freq.<br>(MHz) | SRF<br>Min.<br>(MHz) | RDC<br>(mΩ) | I rms<br>Max.<br>(A) | I sat<br>Typ.<br>(A) | **K-<br>Factor |
|-----------------------|-------------------------|-------------|-----------|------------------------|----------------------|-------------|----------------------|----------------------|----------------|
|                       | L (μH)                  | Tol.<br>(%) |           |                        |                      |             |                      |                      |                |
| SRU1028-1R0Y          | 1.0                     | ±30         | 14        | 7.96                   | 100.0                | 4.9         | 7.00                 | 8.00                 | 315            |
| SRU1028-1R5Y          | 1.5                     | ±30         | 12        | 7.96                   | 80.0                 | 7.3         | 6.50                 | 6.50                 | 245            |
| SRU1028-2R2Y          | 2.2                     | ±30         | 12        | 7.96                   | 65.0                 | 11          | 5.30                 | 4.80                 | 200            |
| SRU1028-3R3Y          | 3.3                     | ±30         | 14        | 7.96                   | 55.0                 | 15          | 4.60                 | 4.30                 | 169            |
| SRU1028-4R7Y          | 4.7                     | ±30         | 12        | 7.96                   | 40.0                 | 16          | 4.50                 | 3.80                 | 147            |
| SRU1028-6R8Y          | 6.8                     | ±30         | 12        | 7.96                   | 30.0                 | 15          | 3.50                 | 3.00                 | 130            |
| SRU1028-8R2Y          | 8.2                     | ±30         | 12        | 7.96                   | 28.0                 | 28          | 3.30                 | 2.70                 | 116            |
| SRU1028-100Y          | 10.0                    | ±30         | 20        | 7.96                   | 25.0                 | 40          | 2.80                 | 2.40                 | 105            |
| SRU1028-120Y          | 12.0                    | ±30         | 22        | 2.52                   | 23.0                 | 70          | 2.40                 | 2.30                 | 93             |
| SRU1028-150Y          | 15.0                    | ±30         | 26        | 2.52                   | 22.0                 | 69          | 2.00                 | 2.00                 | 82             |
| SRU1028-220Y          | 22.0                    | ±30         | 26        | 2.52                   | 16.0                 | 104         | 1.60                 | 1.40                 | 71             |
| SRU1028-330Y          | 33.0                    | ±30         | 24        | 2.52                   | 12.0                 | 139         | 1.25                 | 1.20                 | 60             |
| SRU1028-470Y          | 47.0                    | ±30         | 20        | 2.52                   | 11.0                 | 167         | 1.30                 | 1.10                 | 49             |
| SRU1028-560Y          | 56.0                    | ±30         | 22        | 2.52                   | 10.0                 | 208         | 1.10                 | 1.00                 | 43             |
| SRU1028-680Y          | 68.0                    | ±30         | 20        | 2.52                   | 9.0                  | 232         | 1.00                 | 0.90                 | 39             |
| SRU1028-820Y          | 82.0                    | ±30         | 20        | 2.52                   | 8.0                  | 323         | 0.90                 | 0.85                 | 36             |
| SRU1028-101Y          | 100.0                   | ±30         | 20        | 0.796                  | 7.0                  | 365         | 0.85                 | 0.80                 | 33             |
| SRU1028-121Y          | 120.0                   | ±30         | 18        | 0.796                  | 6.0                  | 428         | 0.65                 | 0.70                 | 31             |
| SRU1028-151Y          | 150.0                   | ±30         | 18        | 0.796                  | 5.0                  | 518         | 0.70                 | 0.65                 | 27             |

\*\*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



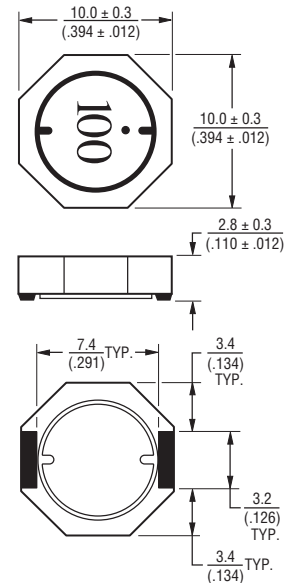
### General Specifications

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  
 Resistance to Soldering Heat  
 .....+260 °C for 10 sec.

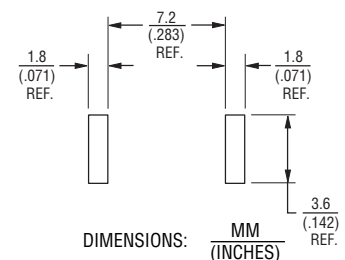
### Materials

Core.....Ferrite DR and RI core  
 Wire .....Enameled copper  
 Terminal.....Ag/Ni/Sn  
 Rated Current  
 .....Ind. drop 35 % typ. at Isat  
 Temperature Rise  
 .....40 °C max. at rated I rms  
 Packaging..... 1000 pcs. per reel

### Product Dimensions



### Recommended Layout

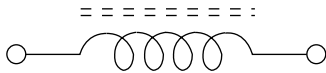


\* RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.  
 Specifications are subject to change without notice.  
 The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.  
 Users should verify actual device performance in their specific applications.

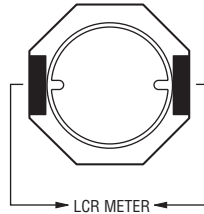
# SRU1028 Series - Shielded SMD Power Inductors

**BOURNS®**

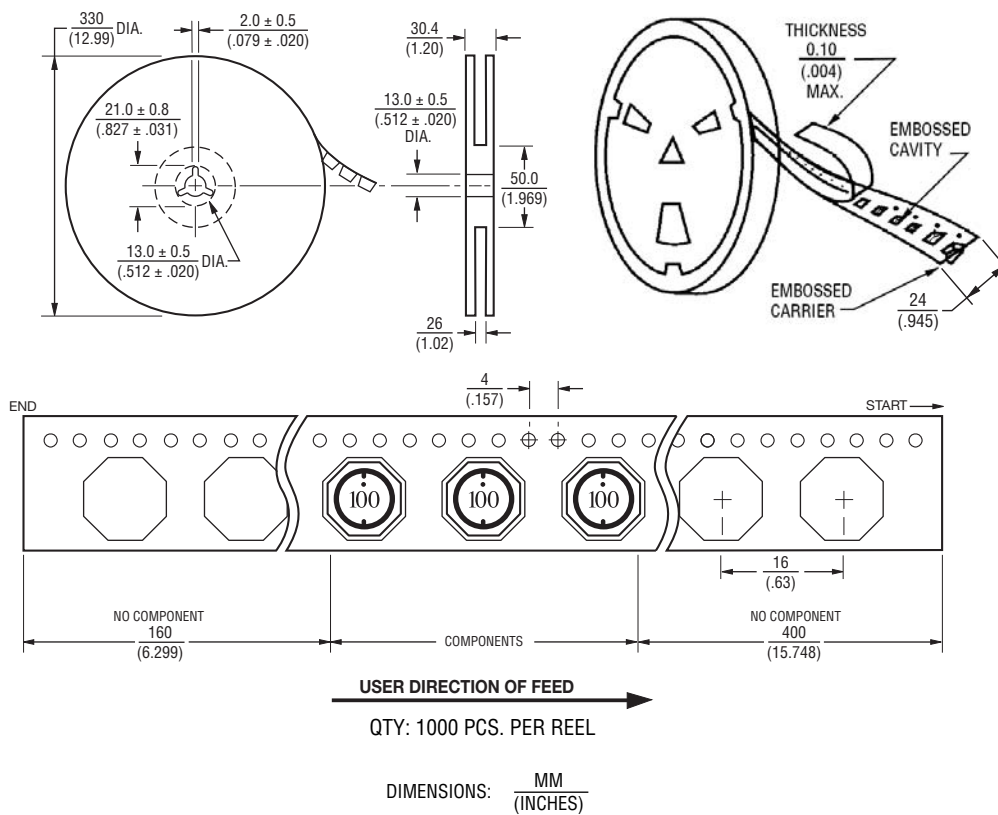
## Electrical Schematic



## Inductor Connection



## Packaging Specifications



REV. 11/13

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