



**THE DATASHEET OF  
SRU5018-1R5Y**





### Features

- Available in E6 series
- Unit height of 1.8 mm
- Current up to 2.8 A
- RoHS compliant\*

### Applications

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

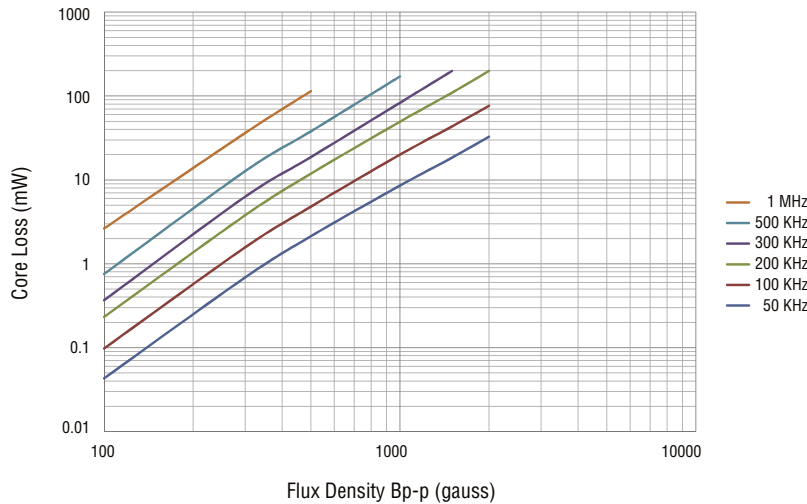
## SRU5018 Series - Shielded SMD Power Inductors

### Electrical Specifications

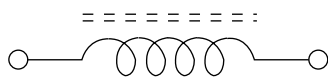
| Bourns Part Number | Inductance @ 100 KHz |          | Q Ref. | Test Freq. (MHz) | SRF Min. (MHz) | RDC (mΩ) | I rms Max. (A) | I sat Typ. (A) | **K-Factor |
|--------------------|----------------------|----------|--------|------------------|----------------|----------|----------------|----------------|------------|
|                    | L (μH)               | Tol. (%) |        |                  |                |          |                |                |            |
| SRU5018-1R0Y       | 1.0                  | ±30      | 9      | 7.96             | 200            | 12.5     | 2.80           | 2.85           | 1105       |
| SRU5018-1R5Y       | 1.5                  | ±30      | 9      | 7.96             | 160            | 15.5     | 2.50           | 2.40           | 904        |
| SRU5018-2R2Y       | 2.2                  | ±30      | 10     | 7.96             | 130            | 20.5     | 2.30           | 2.10           | 765        |
| SRU5018-3R5Y       | 3.5                  | ±30      | 9      | 7.96             | 90             | 32.0     | 2.10           | 1.70           | 585        |
| SRU5018-4R7Y       | 4.7                  | ±30      | 8.5    | 7.96             | 80             | 36.0     | 2.00           | 1.55           | 524        |
| SRU5018-6R8Y       | 6.8                  | ±30      | 7.5    | 7.96             | 60             | 50.0     | 1.45           | 1.20           | 432        |
| SRU5018-100Y       | 10.0                 | ±30      | 12     | 2.52             | 50             | 65.0     | 1.25           | 1.05           | 368        |
| SRU5018-150Y       | 15.0                 | ±30      | 12     | 2.52             | 40             | 100.0    | 0.95           | 0.80           | 301        |
| SRU5018-220Y       | 22.0                 | ±30      | 12     | 2.52             | 28             | 160.0    | 0.68           | 0.65           | 243        |
| SRU5018-330Y       | 33.0                 | ±30      | 13     | 2.52             | 23             | 220.0    | 0.66           | 0.56           | 195        |
| SRU5018-470Y       | 47.0                 | ±30      | 13     | 2.52             | 18             | 330.0    | 0.54           | 0.45           | 163        |
| SRU5018-680Y       | 68.0                 | ±30      | 12     | 2.52             | 16             | 480.0    | 0.37           | 0.36           | 140        |
| SRU5018-101Y       | 100.0                | ±30      | 15     | 0.796            | 15             | 620.0    | 0.32           | 0.31           | 117        |

\*\*K-Factor: To calculate core flux density, Bp-p (gauss) = K x L(μH) x Δ I (peak-to-peak ripple current, A), determine core loss from Core Loss vs. Flux Density plot.

### Core Loss vs. Flux Density

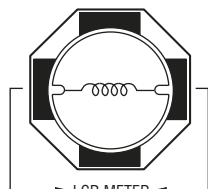


### Electrical Schematic



\* 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. Users should verify actual device performance in their specific applications. The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at [www.bourns.com/docs/legal/disclaimer.pdf](http://www.bourns.com/docs/legal/disclaimer.pdf)

### Inductor Connection



! **WARNING Cancer and Reproductive Harm**  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

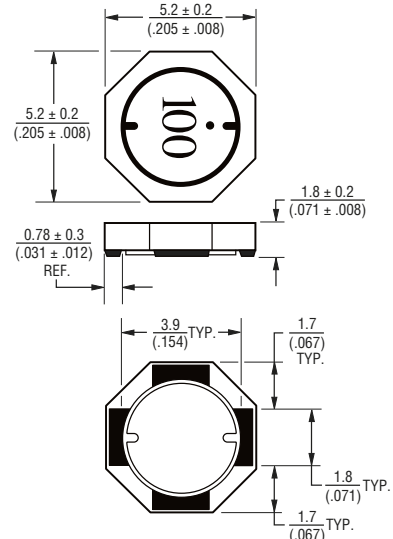
### General Specifications

Test Voltage .....0.1 V  
 Reflow Soldering .. 230 °C, 50 sec. max.  
 Operating Temp. ....-40 °C to +125 °C  
 (Temperature rise included)  
 Storage Temperature...-40 °C to +125 °C  
 Resistance to Soldering Heat  
 ..... +260 °C for 10 sec.  
 Moisture Sensitivity Level..... 1  
 ESD Classification (HBM)..... N/A

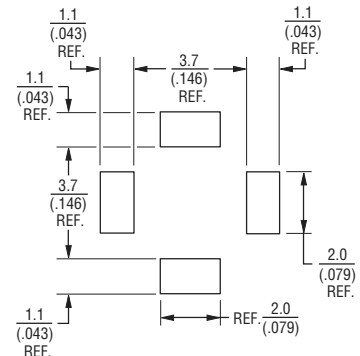
### Materials

Core.....Ferrite DR and RI core  
 Wire .....Enamelled copper  
 Terminal.....Ag/Ni/Sn  
 Rated Current..Ind. drop 35 % typ. at Isat  
 Temperature Rise  
 ..... 30 °C max. at rated Irms  
 Packaging..... 1000 pcs. per reel

### Product Dimensions



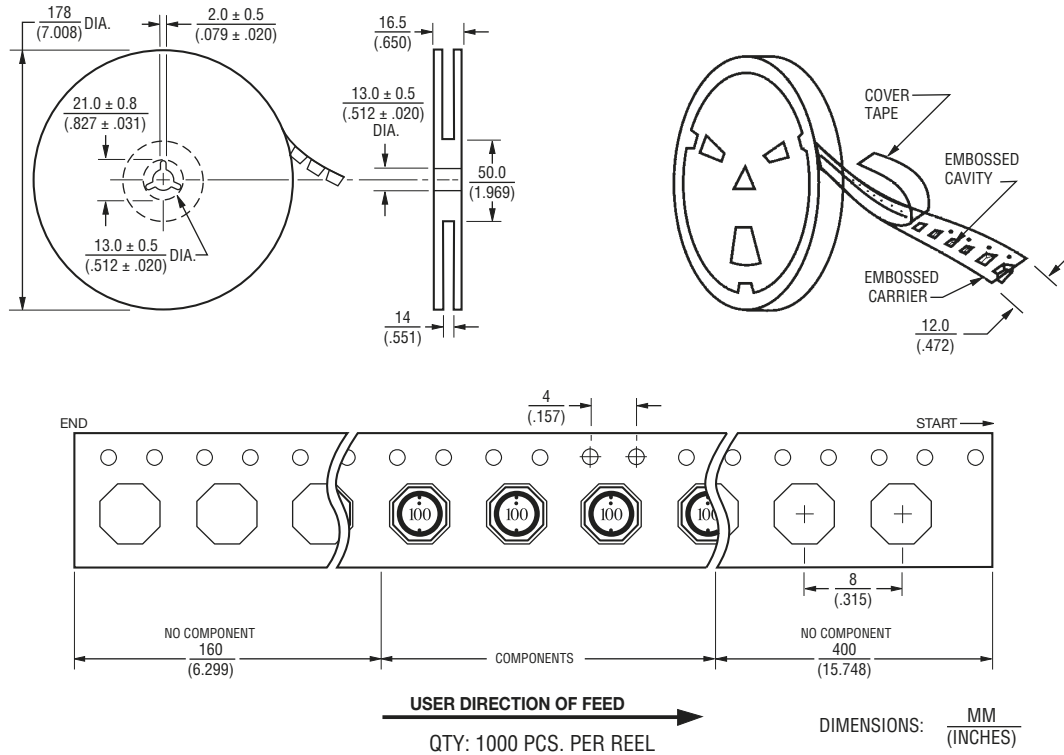
### Recommended Layout



# SRU5018 Series - Shielded SMD Power Inductors

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## Packaging Specifications



REV. 03/18

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

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