



**THE DATASHEET OF  
SRU1048-101Y**





## Features

- Available in E6 series
- Unit height of 4.8 mm
- Current up to 7.8 A
- RoHS compliant\*

## Applications

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

## SRU1048 Series - Shielded SMD Power Inductors

### Electrical Specifications

| Bourns Part Number | Inductance @ 100 KHz |          | Q (Ref.) | Test Freq. (MHz) | SRF Typ. (MHz) | RDC       |           | I rms Max. (A) | I sat Typ. (A) | **K-Factor |
|--------------------|----------------------|----------|----------|------------------|----------------|-----------|-----------|----------------|----------------|------------|
|                    | L (μH)               | Tol. (%) |          |                  |                | Typ. (mΩ) | Max. (mΩ) |                |                |            |
| SRU1048-R80Y       | 0.8                  | ±30      | 8        | 7.96             | 100.0          | 3.6       | 4.8       | 7.80           | 8.50           | 266        |
| SRU1048-1R5Y       | 1.5                  | ±30      | 14       | 7.96             | 70.0           | 4.3       | 5.8       | 7.00           | 7.20           | 207        |
| SRU1048-2R2Y       | 2.2                  | ±30      | 14       | 7.96             | 55.0           | 5.3       | 7.2       | 6.50           | 6.30           | 169        |
| SRU1048-3R0Y       | 3.0                  | ±30      | 14       | 7.96             | 40.0           | 7.2       | 10.0      | 6.20           | 6.00           | 143        |
| SRU1048-4R7Y       | 4.7                  | ±30      | 12       | 7.96             | 30.0           | 9.5       | 12.5      | 5.50           | 4.75           | 124        |
| SRU1048-6R8Y       | 6.8                  | ±30      | 10       | 7.96             | 20.0           | 13.6      | 18.0      | 4.80           | 4.10           | 98         |
| SRU1048-8R2Y       | 8.2                  | ±30      | 8        | 7.96             | 18.0           | 15.0      | 20.0      | 4.60           | 3.80           | 89         |
| SRU1048-100Y       | 10.0                 | ±30      | 26       | 7.96             | 16.0           | 18.5      | 25.0      | 4.50           | 3.70           | 89         |
| SRU1048-120Y       | 12.0                 | ±30      | 26       | 2.52             | 15.0           | 25.0      | 35.0      | 4.00           | 3.30           | 81         |
| SRU1048-150Y       | 15.0                 | ±30      | 30       | 2.52             | 14.0           | 29.0      | 40.0      | 3.20           | 2.70           | 69         |
| SRU1048-220Y       | 22.0                 | ±30      | 22       | 2.52             | 12.0           | 42.0      | 55.0      | 2.60           | 2.00           | 56         |
| SRU1048-330Y       | 33.0                 | ±30      | 24       | 2.52             | 10.0           | 63.0      | 84.0      | 2.10           | 1.70           | 48         |
| SRU1048-470Y       | 47.0                 | ±30      | 26       | 2.52             | 8.0            | 94.0      | 120.0     | 1.70           | 1.50           | 41         |
| SRU1048-560Y       | 56.0                 | ±30      | 26       | 2.52             | 7.0            | 110.0     | 145.0     | 1.60           | 1.40           | 34         |
| SRU1048-680Y       | 68.0                 | ±30      | 24       | 2.52             | 6.0            | 127.0     | 170.0     | 1.40           | 1.25           | 33         |
| SRU1048-820Y       | 82.0                 | ±30      | 24       | 2.52             | 5.5            | 149.0     | 200.0     | 1.30           | 1.10           | 30         |
| SRU1048-101Y       | 100.0                | ±30      | 26       | 0.796            | 5.0            | 160.0     | 220.0     | 1.20           | 1.00           | 26         |
| SRU1048-151Y       | 150.0                | ±30      | 24       | 0.796            | 4.5            | 235.0     | 305.0     | 1.00           | 0.80           | 21         |
| SRU1048-221Y       | 220.0                | ±30      | 20       | 0.796            | 4.0            | 350.0     | 455.0     | 0.80           | 0.70           | 17         |
| SRU1048-331Y       | 330.0                | ±30      | 18       | 0.796            | 3.0            | 490.0     | 640.0     | 0.65           | 0.52           | 15         |
| SRU1048-561Y       | 560.0                | ±30      | 24       | 0.796            | 1.9            | 890.0     | 1237.0    | 0.47           | 0.37           | 12         |

\*\*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



**WARNING Cancer and Reproductive Harm - [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. 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).

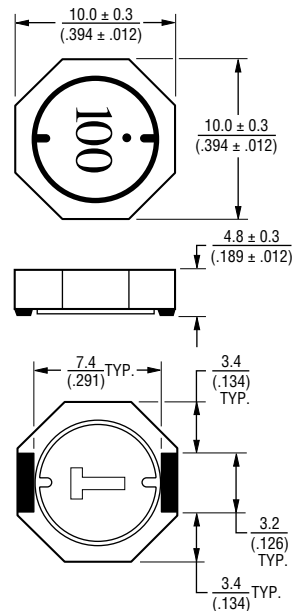
### General Specifications

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.  
 Moisture Sensitivity Level ..... 1  
 ESD Classification (HBM) ..... N/A

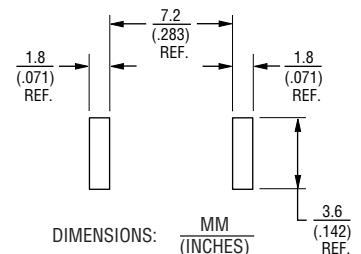
### Materials

Core ..... Ferrite DR and RI core  
 Wire ..... Enameled copper  
 Terminal ..... Ag/Ni/Sn  
 Rated Current ..... Ind. drop 35 % typ. at Isat  
 Temperature Rise ..... 30 °C max. at rated Irms  
 Packaging ..... 600 pcs. per reel

### Product Dimensions



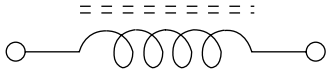
### Recommended Layout



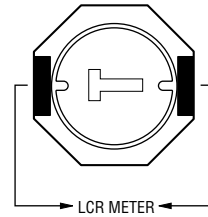
# SRU1048 Series - Shielded SMD Power Inductors



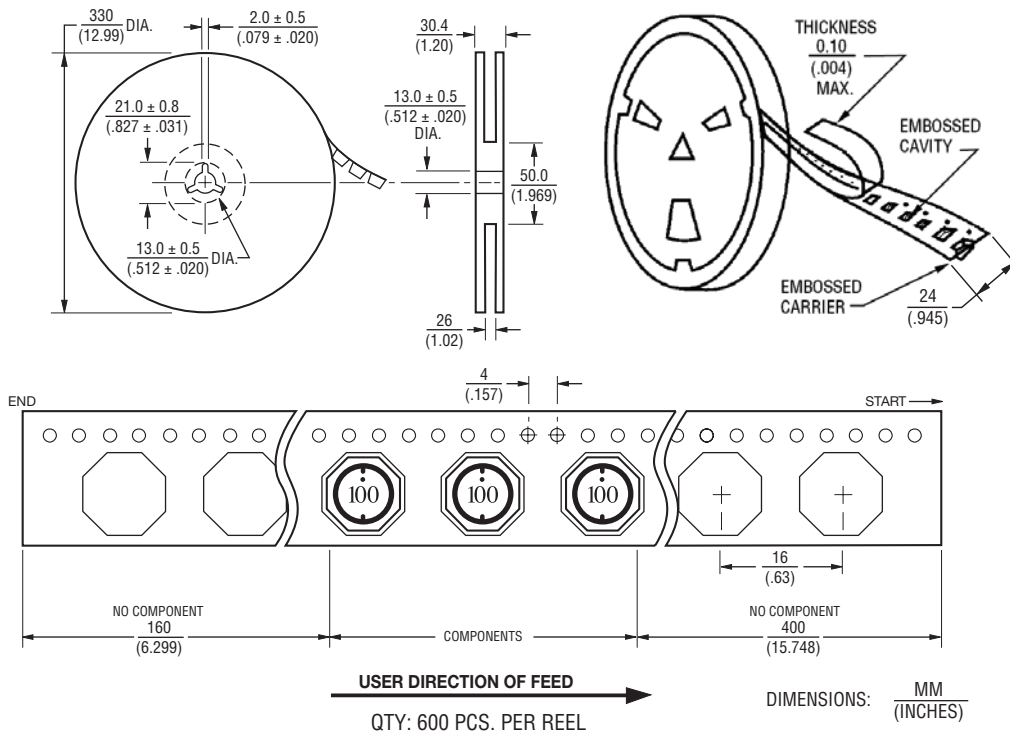
## Electrical Schematic



## Inductor Connection



## Packaging Specifications



REV. 10/20

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

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