



**THE DATASHEET OF
SRU6013-680Y**





Features

- Maximum height of 1.60 mm
- Current up to 3.2 A
- RoHS compliant*

Applications

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

SRU6013 Series - Shielded SMD Power Inductors

Electrical Specifications

| Bourns Part Number | Inductance @ 100 KHz | | Q Ref. | Test Freq. (MHz) | SRF Typ. (MHz) | RDC Max. (mΩ) | I rms Max. (A) | I sat Typ. (A) | **K-Factor |
|--------------------|----------------------|----------|--------|------------------|----------------|---------------|----------------|----------------|------------|
| | L (μH) | Tol. (%) | | | | | | | |
| SRU6013-1R0Y | 1.0 | ±30 | 12 | 7.96 | 100 | 36 | 3.20 | 2.90 | 453 |
| SRU6013-1R5Y | 1.5 | ±30 | 10 | 7.96 | 90 | 40 | 3.00 | 2.40 | 370 |
| SRU6013-2R2Y | 2.2 | ±30 | 10 | 7.96 | 80 | 50 | 2.50 | 2.10 | 313 |
| SRU6013-3R3Y | 3.3 | ±30 | 10 | 7.96 | 70 | 60 | 2.35 | 1.75 | 272 |
| SRU6013-4R2Y | 4.2 | ±30 | 10 | 7.96 | 55 | 75 | 2.10 | 1.50 | 214 |
| SRU6013-6R4Y | 6.4 | ±30 | 10 | 7.96 | 45 | 110 | 1.70 | 1.30 | 177 |
| SRU6013-100Y | 10 | ±30 | 14 | 2.52 | 35 | 165 | 1.40 | 1.00 | 151 |
| SRU6013-150Y | 15 | ±30 | 12 | 2.52 | 26 | 235 | 1.10 | 0.80 | 116 |
| SRU6013-220Y | 22 | ±30 | 12 | 2.52 | 22 | 325 | 0.95 | 0.72 | 99 |
| SRU6013-330Y | 33 | ±30 | 10 | 2.52 | 18 | 500 | 0.78 | 0.58 | 77 |
| SRU6013-470Y | 47 | ±30 | 10 | 2.52 | 14 | 675 | 0.66 | 0.50 | 65 |
| SRU6013-680Y | 68 | ±30 | 10 | 2.52 | 10 | 900 | 0.60 | 0.40 | 57 |

**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.

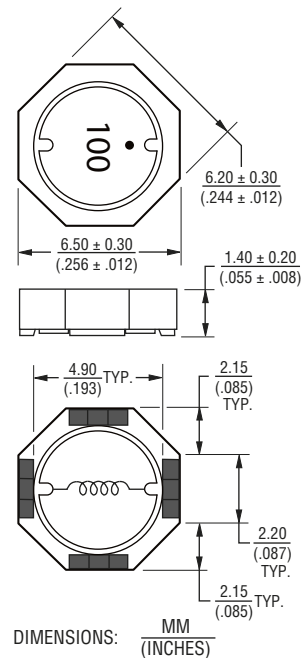
General Specifications

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

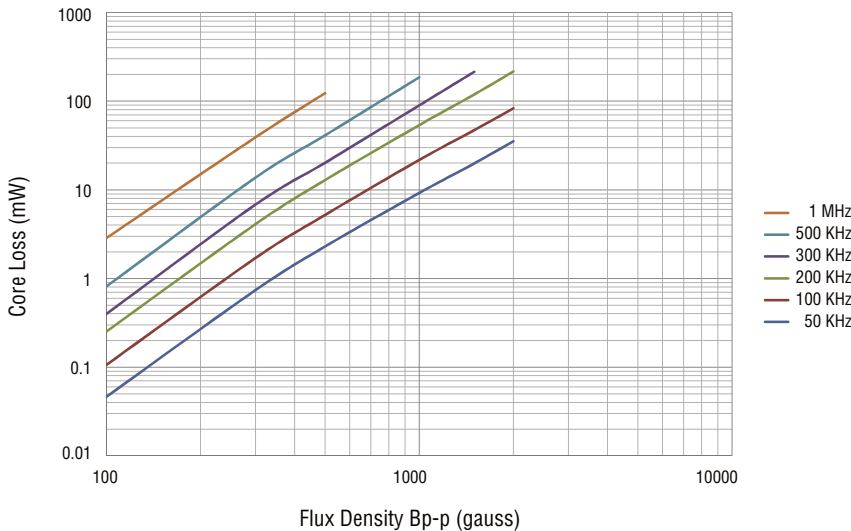
Materials

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

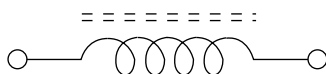
Product Dimensions



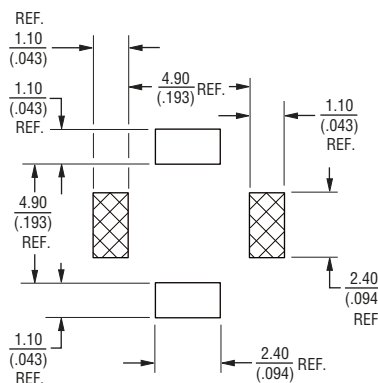
Core Loss vs. Flux Density



Electrical Schematic



Recommended Layout



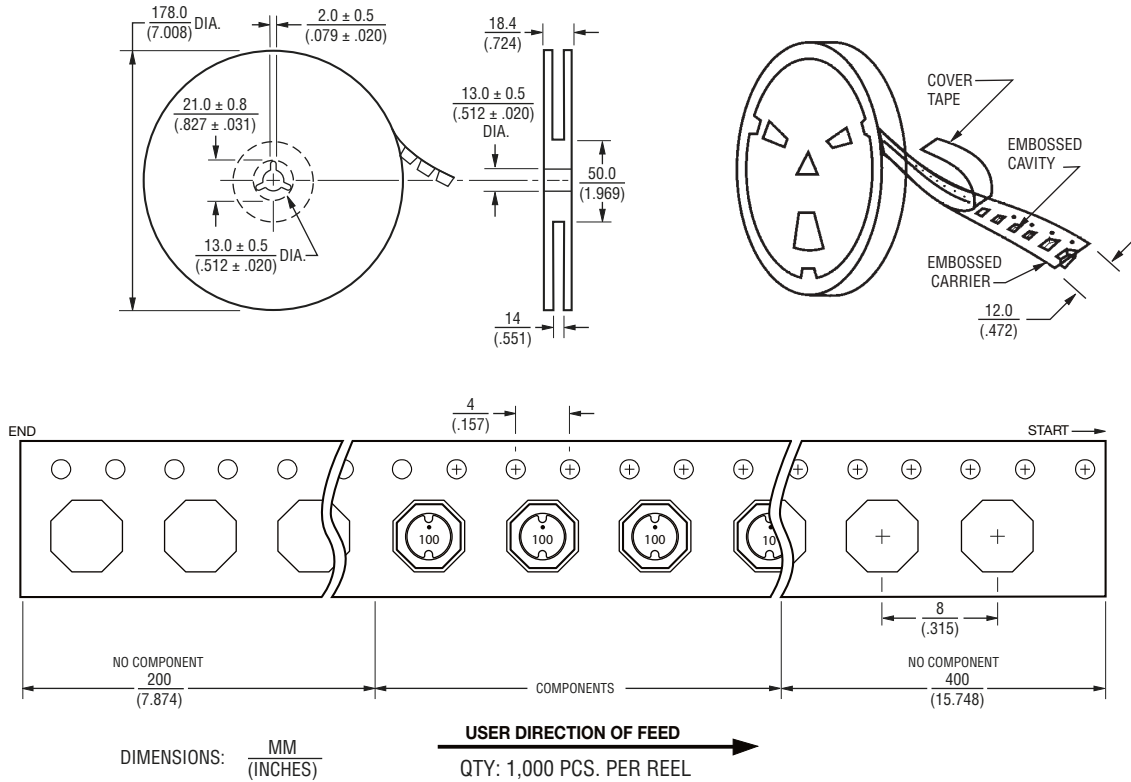

WARNING Cancer and Reproductive Harm
www.P65Warnings.ca.gov

* RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.
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SRU6013 Series - Shielded SMD Power Inductors

BOURNS®

Packaging Specifications



REV. 03/18

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