



## 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

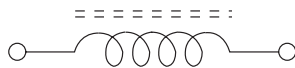
# SRU1038 Series - Shielded SMD Power Inductors

### Electrical Specifications

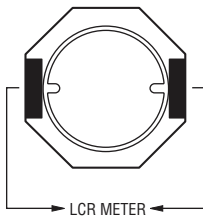
Bourns Part No.	Inductance 100 KHz		Q Ref.	Test Freq. (MHz)	SRF Typ. (MHz)	RDC (mΩ)	I <sub>rms</sub> Max. (A)	I <sub>sat</sub> Typ. (A)	**K-Factor
	(μH)	Tol. %							
SRU1038-1R5Y	1.5	±30	14	7.96	65.0	5.2	7.20	7.00	177
SRU1038-2R2Y	2.2	±30	12	7.96	55.0	7.7	6.80	6.50	145
SRU1038-2R5Y	2.5	±30	12	7.96	50.0	12.5	6.10	6.00	136
SRU1038-3R5Y	3.5	±30	14	7.96	24.0	11.5	5.50	5.50	106
SRU1038-3R8Y	3.8	±30	14	7.96	35.0	15.0	5.50	5.50	104
SRU1038-5R0Y	5.0	±30	12	7.96	30.0	14.5	4.60	4.80	94
SRU1038-5R2Y	5.2	±30	12	7.96	30.0	22.0	4.60	4.80	92
SRU1038-6R2Y	6.2	±30	12	7.96	25.0	16.5	4.00	4.20	84
SRU1038-6R8Y	6.8	±30	13	7.96	36.0	35.0	3.90	4.00	80
SRU1038-8R2Y	8.2	±30	12	7.96	22.0	32.0	3.80	3.90	73
SRU1038-100Y	10.0	±30	24	7.96	20.0	25.0	3.80	3.60	64
SRU1038-150Y	15.0	±30	24	2.52	16.0	37.0	2.80	2.70	51
SRU1038-220Y	22.0	±30	20	2.52	12.0	55.8	2.20	2.30	43
SRU1038-270Y	27.0	±30	22	2.52	11.0	78.0	1.85	1.90	39
SRU1038-330Y	33.0	±30	22	2.52	10.0	86.0	1.80	1.80	35
SRU1038-470Y	47.0	±30	22	2.52	8.0	121.0	1.65	1.60	29
SRU1038-680Y	68.0	±30	24	2.52	7.0	166.0	1.10	1.30	26
SRU1038-101Y	100.0	±30	24	0.796	6.0	220.0	1.30	1.10	20
SRU1038-151Y	150.0	±30	20	0.796	5.0	358.0	0.90	0.80	16
SRU1038-221Y	220.0	±30	22	0.796	4.0	565.0	0.65	0.65	14
SRU1038-331Y	330.0	±30	20	0.796	3.0	773.0	0.55	0.52	11

\*\*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 on page 2.

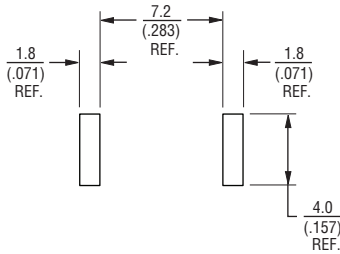
### Electrical Schematic



### Inductor Connection



### Recommended Layout



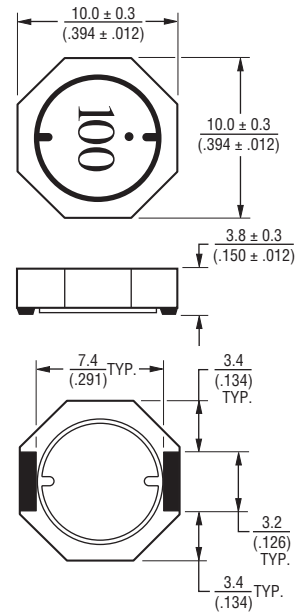
### General Specifications

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

### Materials

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

### Product Dimensions



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

\*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.

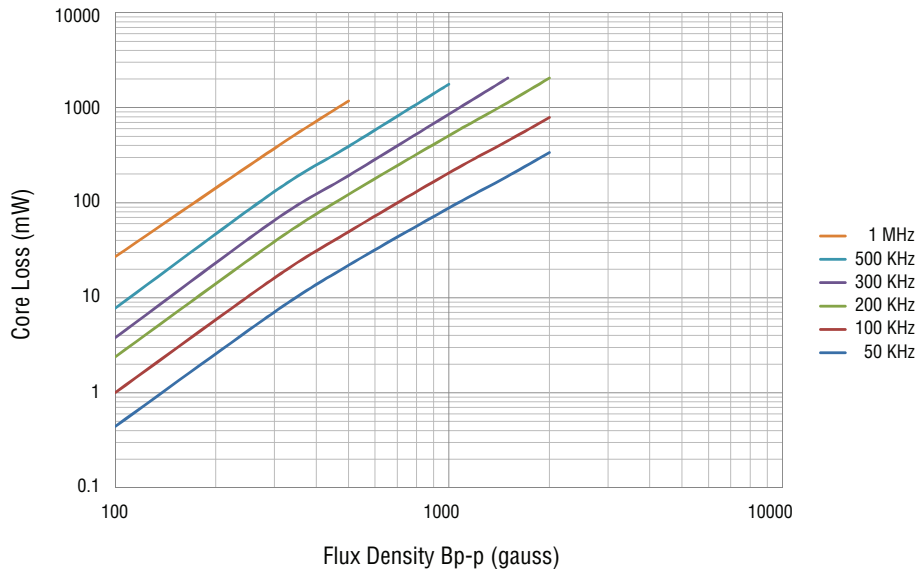
Specifications are subject to change without notice.

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.

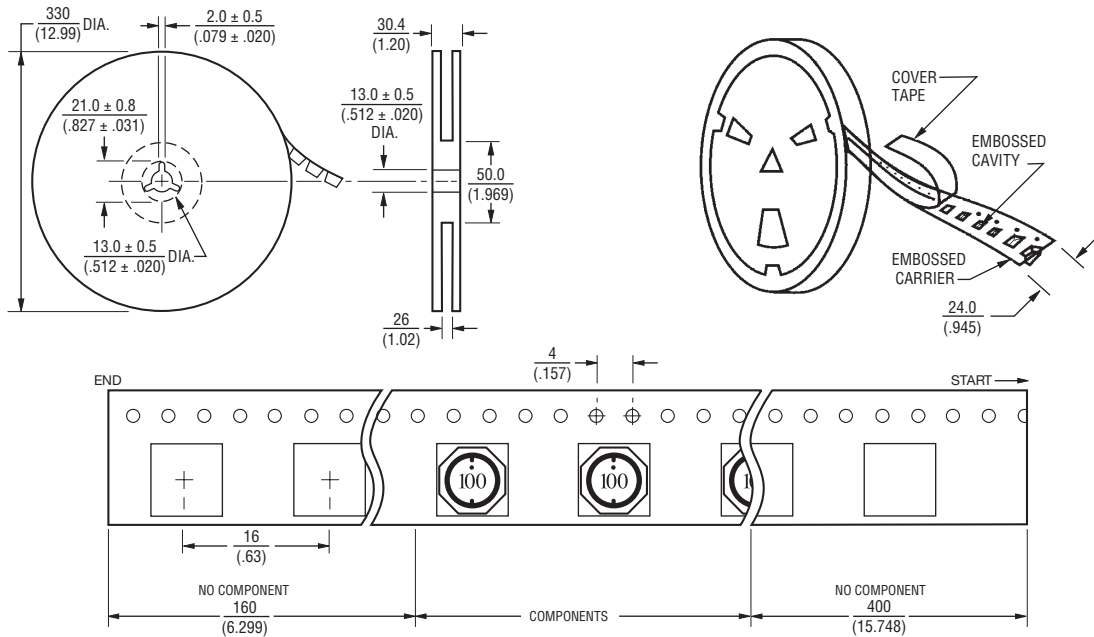
# SRU1038 Series - Shielded SMD Power Inductors

**BOURNS®**

## Core Loss vs. Flux Density



## Packaging Specifications



USER DIRECTION OF FEED →

QTY: 800 PCS. PER REEL

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

REV. 03/18

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