



**THE DATASHEET OF  
SRU1038-5R0Y**





## 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

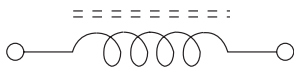
# SRU1038 Series - Shielded SMD Power Inductors

### Electrical Specifications

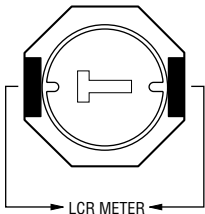
Bourns Part No.	Inductance 100 KHz		Q Ref.	Test Freq. (MHz)	SRF Typ. (MHz)	RDC Max. (mΩ)	I <sub>rms</sub> Max. (A)	I <sub>sat</sub> Typ. (A)	**K-Factor
	(μH)	Tol. %							
SRU1038-1R5Y	1.5	±30	14	7.96	65.0	5.2	7.20	7.00	177
SRU1038-2R2Y	2.2	±30	12	7.96	55.0	10.5	6.80	6.50	145
SRU1038-2R5Y	2.5	±30	12	7.96	50.0	12.5	6.10	6.00	136
SRU1038-3R5Y	3.5	±30	14	7.96	35.0	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	2.52	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	1.30	1.30	26
SRU1038-101Y	100.0	±30	24	0.796	6.0	220.0	1.10	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.

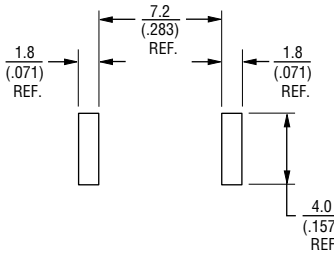
### Electrical Schematic



### Inductor Connection



### Recommended Layout



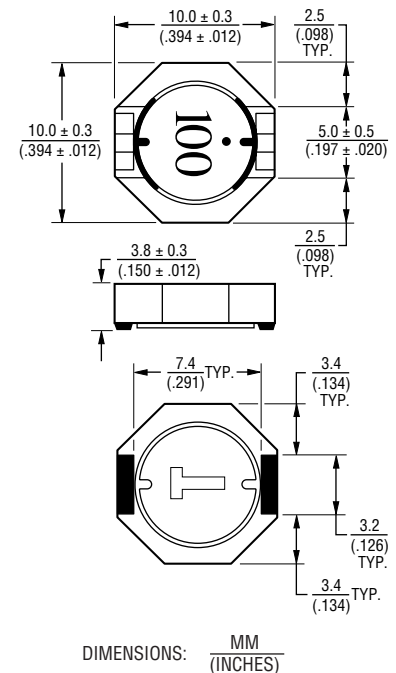
### General Specifications

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



**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.

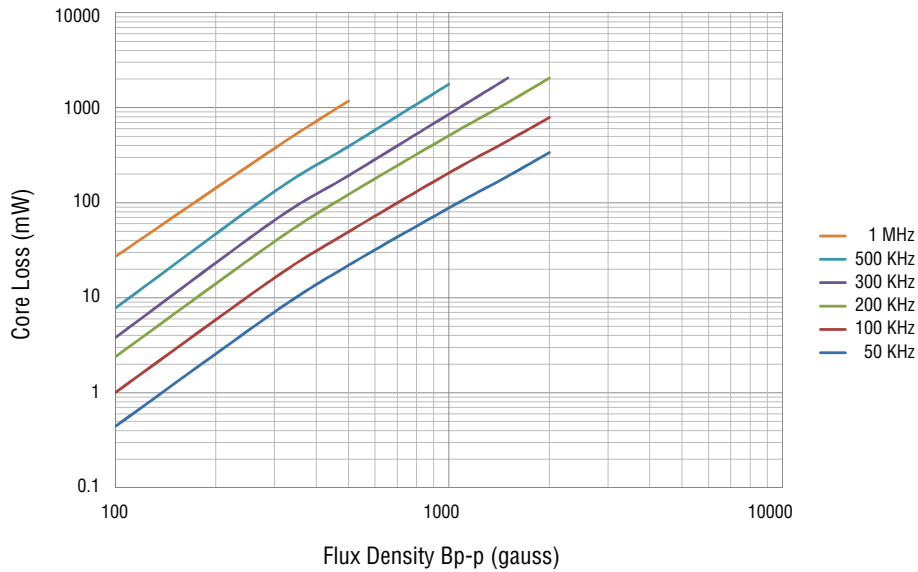
Users should verify actual device performance in their specific applications.

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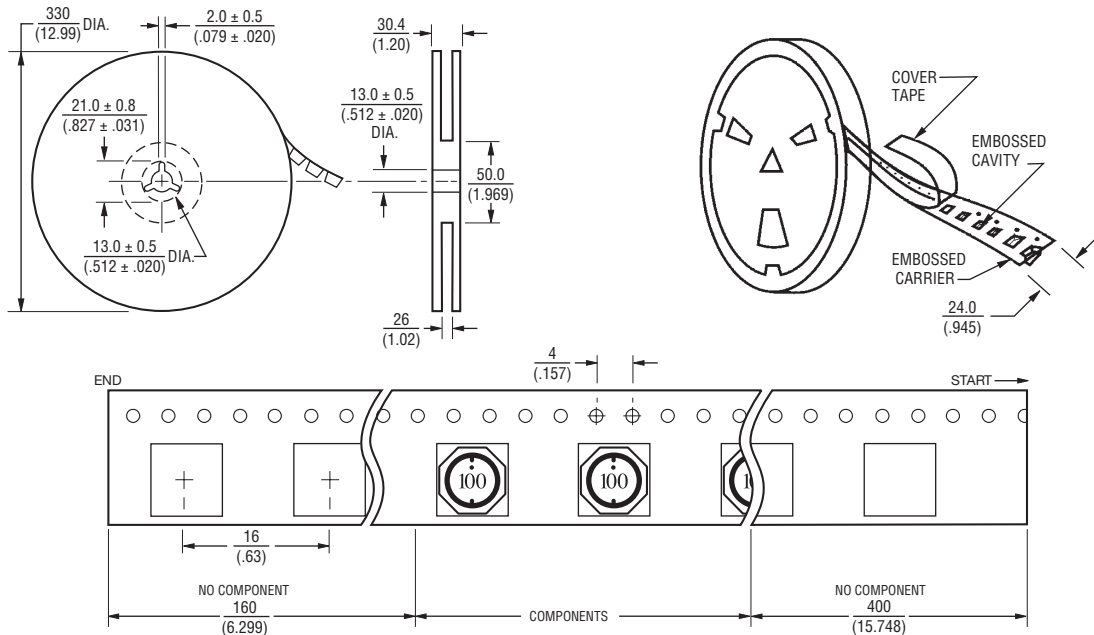
# SRU1038 Series - Shielded SMD Power Inductors

**BOURNS®**

## Core Loss vs. Flux Density



## Packaging Specifications



USER DIRECTION OF FEED →

QTY: 800 PCS. PER REEL

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

REV. 09/20

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Users should verify actual device performance in their specific applications.

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