

## 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

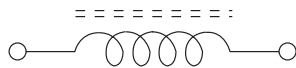
# SRU1038 Series – Shielded SMD Power Inductors

## Electrical Specifications

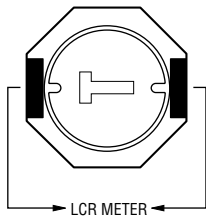
Bourns Part No.	Inductance 100 KHz		Q Ref.	Test Freq. (MHz)	SRF Typ. (MHz)	RDC Max. (mΩ)	Irms Max. (A)	Isat Typ. (A)	**K-Factor
	(μH)	Tol. %							
SRU1038-1R5Y	1.5	±30	14	7.96	65.0	7.5	7.20	7.00	177
SRU1038-2R2Y	2.2	±30	12	7.96	55.0	10.5	6.80	6.50	145
SRU1038-2R5Y	2.5	±30	12	7.96	50.0	12.5	6.10	6.00	136
SRU1038-3R5Y	3.5	±30	14	7.96	35.0	15.0	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	22.0	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	24.0	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	35.0	3.80	3.60	64
SRU1038-150Y	15.0	±30	24	2.52	16.0	50.0	2.80	2.70	51
SRU1038-220Y	22.0	±30	20	2.52	12.0	75.0	2.20	2.30	43
SRU1038-270Y	27.0	±30	22	2.52	11.0	100.0	2.20	2.30	39
SRU1038-330Y	33.0	±30	22	2.52	10.0	112.0	1.85	1.90	35
SRU1038-470Y	47.0	±30	22	2.52	8.0	160.0	1.65	1.60	29
SRU1038-680Y	68.0	±30	24	2.52	7.0	216.0	1.30	1.30	26
SRU1038-101Y	100.0	±30	24	0.796	6.0	300.0	1.10	1.10	20
SRU1038-151Y	150.0	±30	20	0.796	5.0	476.0	0.90	0.80	16
SRU1038-221Y	220.0	±30	22	0.796	4.0	740.0	0.65	0.65	14
SRU1038-331Y	330.0	±30	20	0.796	3.0	1000.0	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.

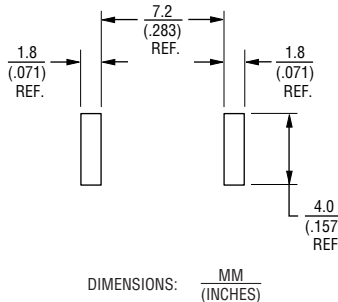
## Electrical Schematic



## Inductor Connection



## Recommended Layout



## Additional Information

Click these links for more information:



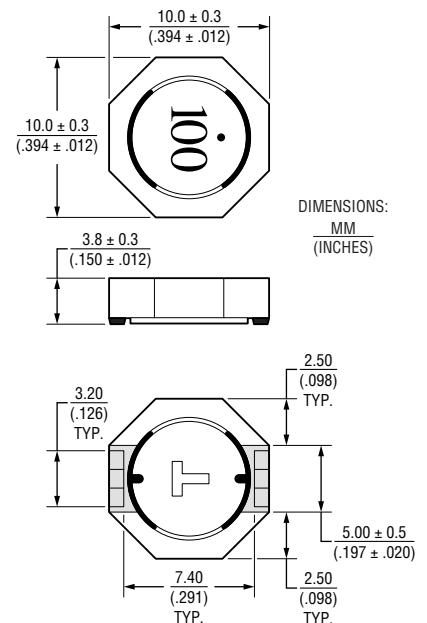
## General Specifications

Test Voltage ..... 1 V  
 Operating Temperature ..... -40 °C to +125 °C  
 (Temperature rise included)  
 Storage Temperature ..... -40 °C to +125 °C  
 Rated Current ..... Ind. drop 35 % typ. at Isat  
 Temperature Rise ..... 40 °C max. at rated Irms  
 Moisture Sensitivity Level ..... 1  
 ESD Classification (HBM) ..... N/A

## Materials

Core ..... Ferrite DR and RI core  
 Wire ..... Enameled copper  
 Terminal Finish ..... SnAgCu  
 Packaging ..... 800 pcs. per reel

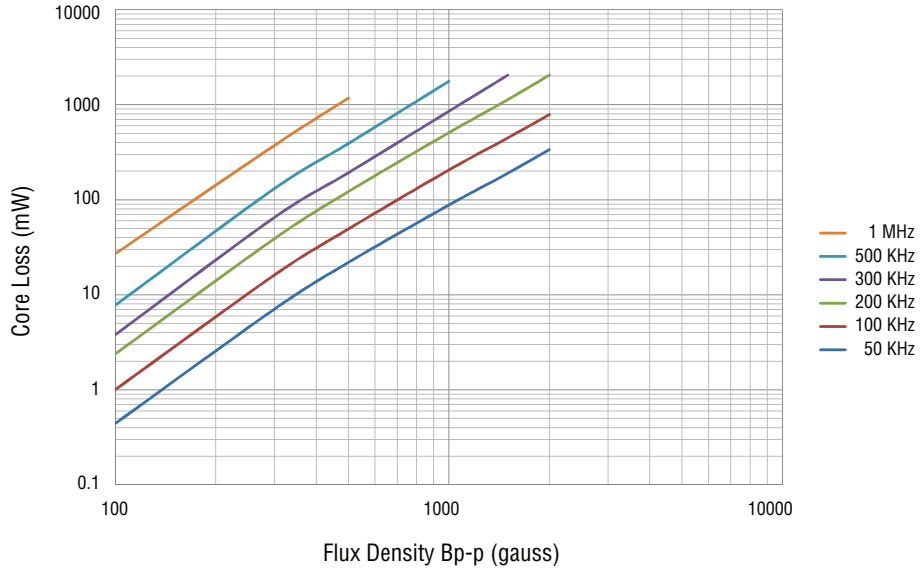
## Product Dimensions



**CALIFORNIA WARNING:** Can expose you to lead, a carcinogen and reproductive toxicant. See [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

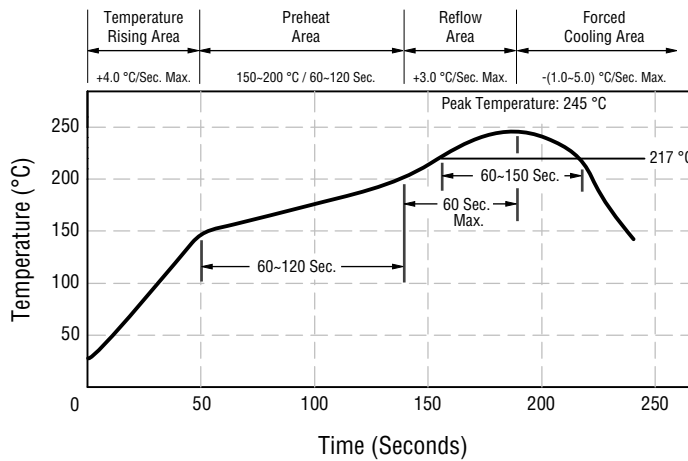
\*RoHS Directive 2015/863, Mar 31, 2015 and Annex. Specifications are subject to change without notice. Users should verify actual device performance in their specific applications. The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at [www.bourns.com/docs/legal/disclaimer.pdf](http://www.bourns.com/docs/legal/disclaimer.pdf).

## Core Loss vs. Flux Density



## Soldering Profile

Peak Temperature: 245 °C max.  
 Max. Peak Temperature -5 °C: 30 sec. max.  
 Max. Time Above 217 °C: 60~150 sec. max.



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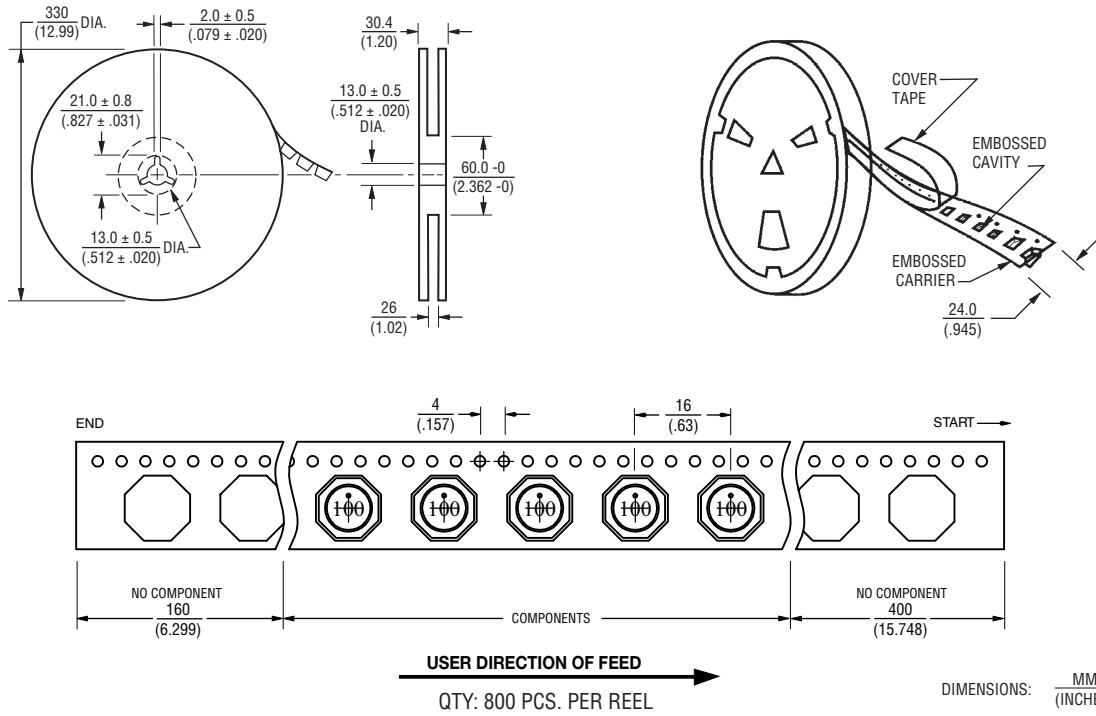
Users should verify actual device performance in their specific applications.

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# SRU1038 Series – Shielded SMD Power Inductors

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## Packaging Specifications



REV. 02/26

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