

## 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

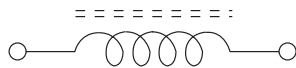
# SRU1038 Series – Shielded SMD Power Inductors

## Electrical Specifications

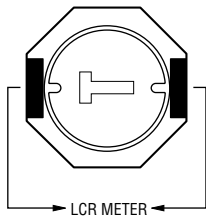
Bourns Part No.	Inductance 100 KHz		Q Ref.	Test Freq. (MHz)	SRF Typ. (MHz)	RDC Max. (mΩ)	Irms Max. (A)	Isat Typ. (A)	**K-Factor
	(μH)	Tol. %							
SRU1038-1R5Y	1.5	±30	14	7.96	65.0	7.5	7.20	7.00	177
SRU1038-2R2Y	2.2	±30	12	7.96	55.0	10.5	6.80	6.50	145
SRU1038-2R5Y	2.5	±30	12	7.96	50.0	12.5	6.10	6.00	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.

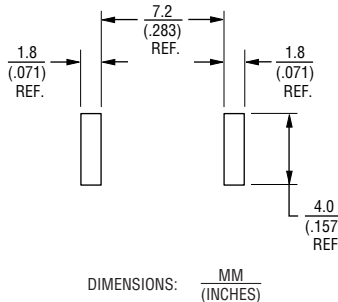
## Electrical Schematic



## Inductor Connection



## Recommended Layout



## Additional Information

Click these links for more information:



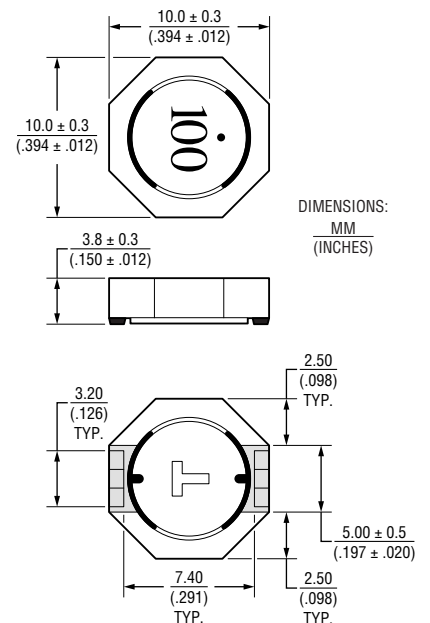
## General Specifications

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

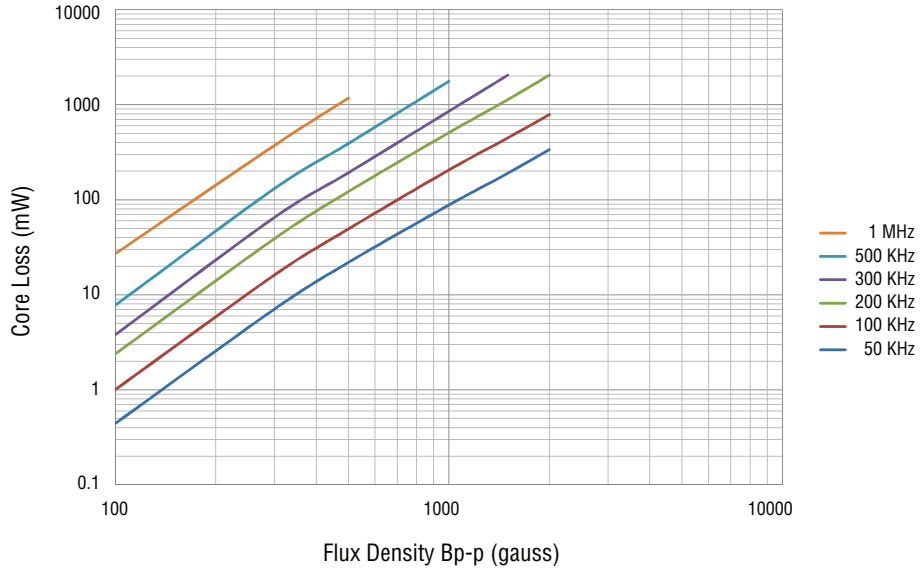
## Product Dimensions



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

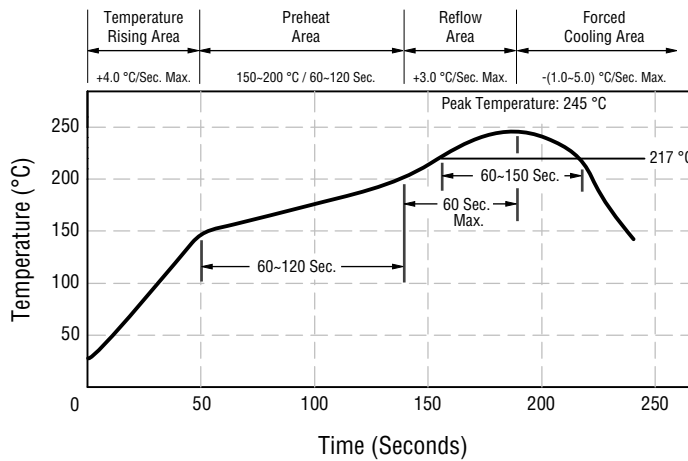
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## Core Loss vs. Flux Density



## 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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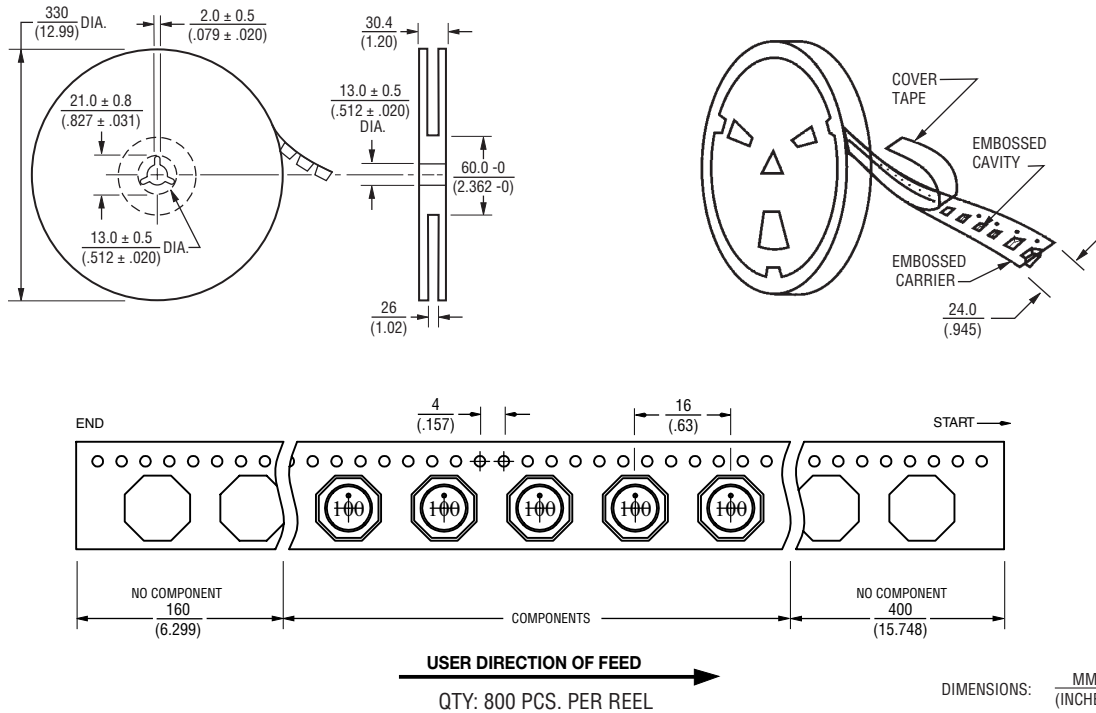
Users should verify actual device performance in their specific applications.

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# SRU1038 Series – Shielded SMD Power Inductors

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## Packaging Specifications



REV. 02/26

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