



**THE DATASHEET OF
SRU1038-220Y**





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

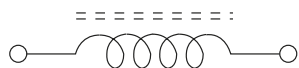
SRU1038 Series - Shielded SMD Power Inductors

Electrical Specifications

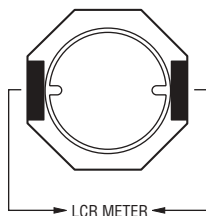
Bourns Part No.	Inductance 100 KHz		Q Ref.	Test Freq. (MHz)	SRF Typ. (MHz)	RDC (mΩ)	I _{rms} Max. (A)	I _{sat} Typ. (A)	**K-Factor
	(μH)	Tol. %							
SRU1038-1R5Y	1.5	± 30	14	7.96	65.0	5.2	7.20	7.00	177
SRU1038-2R2Y	2.2	± 30	12	7.96	55.0	7.7	6.80	6.50	145
SRU1038-2R5Y	2.5	± 30	12	7.96	50.0	12.5	6.10	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.

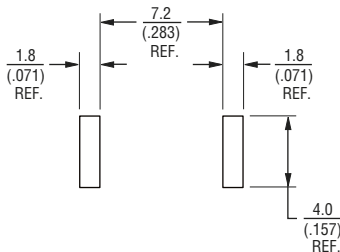
Electrical Schematic



Inductor Connection



Recommended Layout



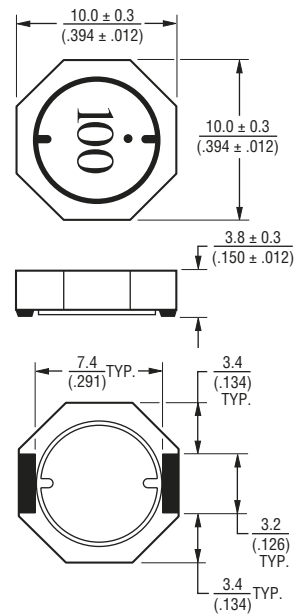
General Specifications

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_{sat}
 Temperature Rise 40 °C max. at rated I_{rms}
 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
 Packaging 800 pcs. per reel

Product Dimensions



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



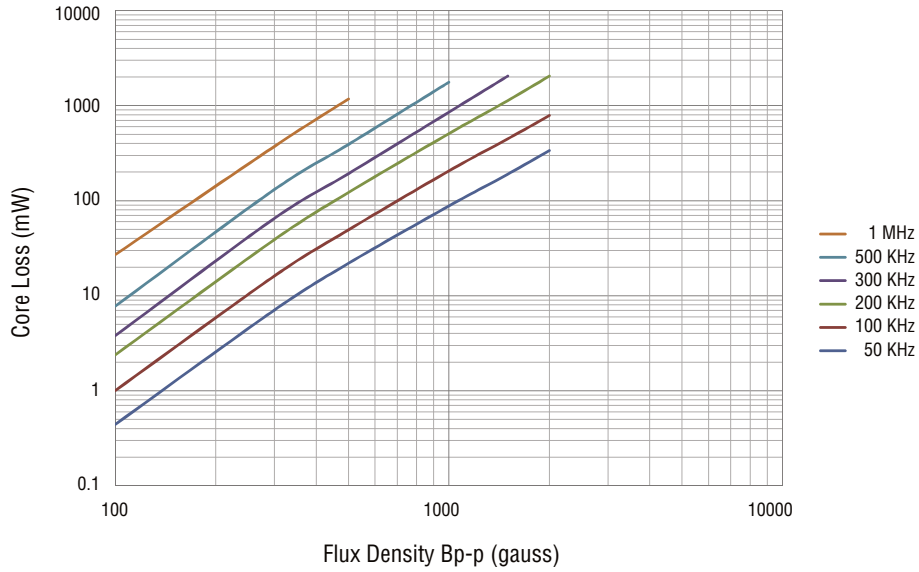
WARNING Cancer and Reproductive Harm - www.P65Warnings.ca.gov

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

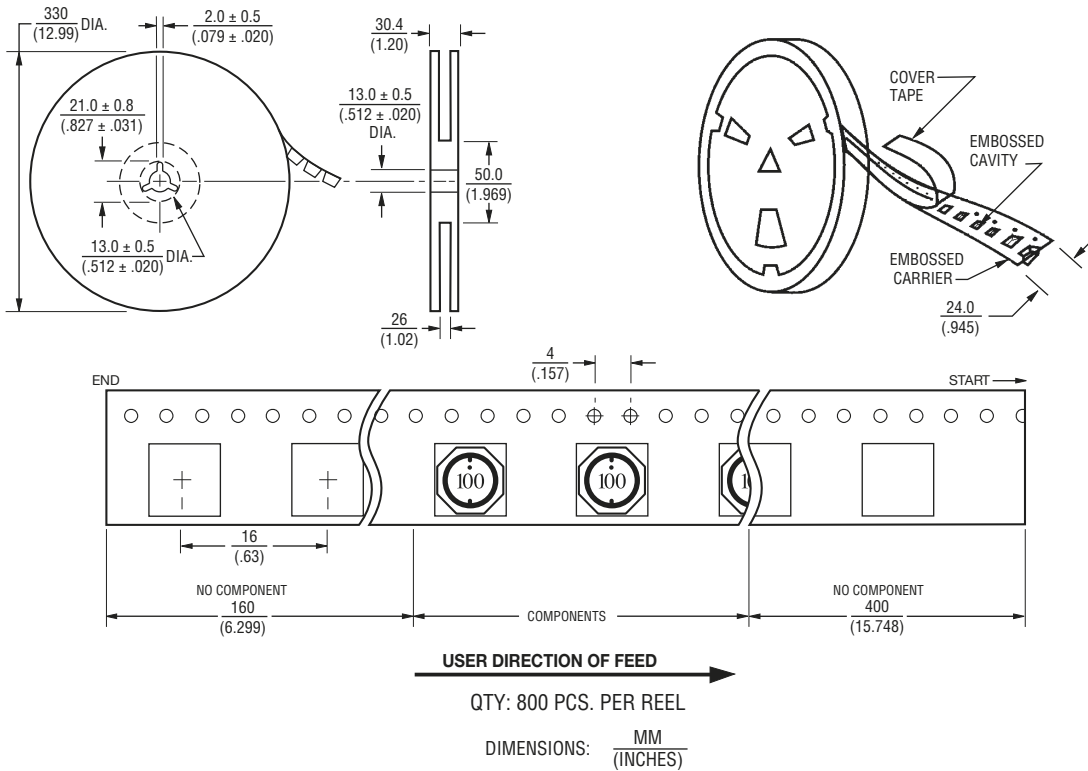
SRU1038 Series - Shielded SMD Power Inductors

BOURNS®

Core Loss vs. Flux Density



Packaging Specifications



REV. 03/18

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Users should verify actual device performance in their specific applications.

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