



## Features

- Available in E12 values
- Inductance range as low as 1.1  $\mu\text{H}$
- Current rating to 10.2 amps
- RoHS compliant\*

## Applications

- Input/output of DC/DC converters
- Power supplies for:
  - Portable communication equipment
  - Camcorders
  - LCD televisions

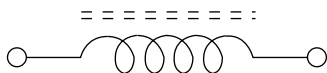
# SRR1280 Series - Shielded SMD Power Inductors

## Electrical Specifications

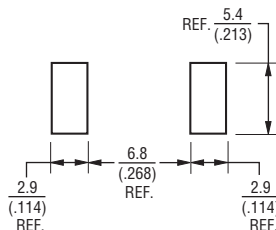
Bourns Part Number	Inductance		Q (Typ.)	Test Freq. (MHz)	SRF Typ. (MHz)	RDC Max. (m $\Omega$ )	I rms Max. (A)	I sat Typ. (A)	**K-Factor
	( $\mu\text{H}$ )	Tol. (%)							
SRR1280-1R1Y	1.1	$\pm 30$	26	7.96	85	6.5	10.20	14.00	94
SRR1280-1R2Y	1.2	$\pm 30$	28	7.96	83	18.0	6.60	7.80	90
SRR1280-1R4Y	1.4	$\pm 30$	24	7.96	80	9.8	9.80	12.00	90
SRR1280-2R4Y	2.4	$\pm 30$	20	7.96	45	10.0	9.20	10.50	62
SRR1280-3R3Y	3.3	$\pm 30$	20	7.96	40	12.0	8.80	9.80	54
SRR1280-3R5Y	3.5	$\pm 30$	20	7.96	36	12.0	8.80	9.80	56
SRR1280-4R5Y	4.5	$\pm 30$	20	7.96	34	13.5	8.50	9.00	48
SRR1280-4R7Y	4.7	$\pm 30$	22	7.96	30	15.5	8.20	8.80	48
SRR1280-5R6Y	5.6	$\pm 30$	20	7.96	24	16.0	8.00	8.50	44
SRR1280-6R1Y	6.1	$\pm 30$	20	7.96	23	18.0	6.60	7.80	43
SRR1280-6R8Y	6.8	$\pm 30$	20	7.96	22	18.5	7.60	8.00	39
SRR1280-7R5Y	7.5	$\pm 30$	16	7.96	21	17.5	6.40	7.00	37
SRR1280-7R6Y	7.6	$\pm 30$	15	7.96	21	20.0	5.90	6.50	35
SRR1280-8R2Y	8.2	$\pm 30$	22	2.52	20	20.5	6.20	6.80	35
SRR1280-100M	10.0	$\pm 20$	24	2.52	17	19.5	6.00	6.30	32
SRR1280-120M	12.0	$\pm 20$	26	2.52	15	28.0	5.60	6.60	30
SRR1280-150M	15.0	$\pm 20$	26	2.52	13	28.5	5.20	5.00	28
SRR1280-180M	18.0	$\pm 20$	24	2.52	12	35.0	4.80	4.60	23
SRR1280-220M	22.0	$\pm 20$	20	2.52	11	38.6	4.30	4.10	21
SRR1280-270M	27.0	$\pm 20$	26	2.52	10	52.0	3.90	3.70	20
SRR1280-330M	33.0	$\pm 20$	28	2.52	9.5	57.0	3.50	3.30	17
SRR1280-390M	39.0	$\pm 20$	24	2.52	8.5	70.0	3.20	3.10	16
SRR1280-470M	47.0	$\pm 20$	24	2.52	7.5	80.0	2.90	2.80	15
SRR1280-560M	56.0	$\pm 20$	24	2.52	7.0	100.0	2.60	2.50	13
SRR1280-680M	68.0	$\pm 20$	20	2.52	6.5	120.0	2.40	2.30	12
SRR1280-820M	82.0	$\pm 20$	20	0.796	5.0	130.0	2.30	2.20	11
SRR1280-101M	100.0	$\pm 20$	18	0.796	4.5	150.0	2.10	2.00	10
SRR1280-121K	120.0	$\pm 10$	16	0.796	4.3	200.0	1.95	1.95	9
SRR1280-151K	150.0	$\pm 10$	24	0.796	4.1	270.0	1.85	1.90	8
SRR1280-181K	180.0	$\pm 10$	24	0.796	4.0	300.0	1.75	1.88	7
SRR1280-221K	220.0	$\pm 10$	24	0.796	3.4	400.0	1.60	1.70	7
SRR1280-271K	270.0	$\pm 10$	20	0.796	3.1	450.0	1.20	1.60	6
SRR1280-331K	330.0	$\pm 10$	18	0.796	2.9	600.0	1.10	1.40	5
SRR1280-391K	390.0	$\pm 10$	20	0.796	2.7	680.0	1.00	1.40	5
SRR1280-471K	470.0	$\pm 10$	20	0.796	2.2	880.0	0.90	1.25	5
SRR1280-561K	560.0	$\pm 10$	20	0.796	2.0	960.0	0.80	1.15	4
SRR1280-681K	680.0	$\pm 10$	26	0.796	1.7	1300.0	0.75	0.97	4
SRR1280-821K	820.0	$\pm 10$	20	0.796	1.4	1500.0	0.70	0.94	4
SRR1280-102K	1000.0	$\pm 10$	40	0.252	1.3	1700.0	0.68	0.80	3

\*\*K-Factor: To calculate core flux density,  $B_p$ -p (gauss) =  $K \times L(\mu\text{H}) \times \Delta I$  (peak-to-peak ripple current, A), determine core loss from *Core Loss vs. Flux Density* plot.

## Electrical Schematic



## Recommended Layout



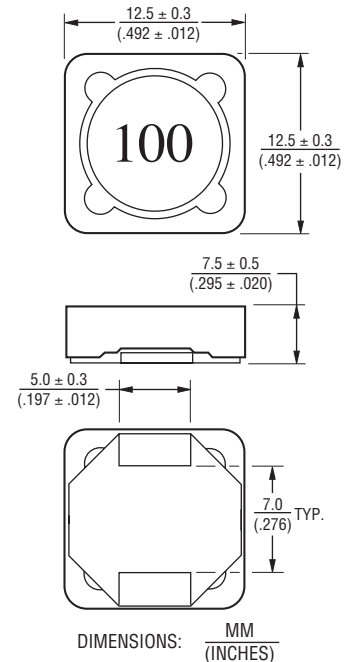
## General Specifications

Inductance Test Frequency / Voltage  
 SRR1280-1R1Y to -8R2Y ... 100 kHz/1 V  
 SRR1280-100M to -102K..... 1 kHz/1 V  
 Operating Temperature  
 .....-40 °C to +125 °C  
 (Temperature rise included)  
 Storage Temperature  
 .....-40 °C to +125 °C  
 Resistance to Soldering Heat  
 .....+260 °C for 10 sec.  
 Temperature Rise  
 ..... 40 °C max. at rated I rms  
 Inductance Drop ..... 25 % typ. at I sat  
 Moisture Sensitivity Level..... 1  
 ESD Classification (HBM)..... N/A

## Materials

Core..... Ferrite DR and RI  
 Wire..... Enameled copper wire 130  
 Terminal..... Cu/Ni/Sn  
 Packaging..... 400 pcs. per reel

## Product Dimensions

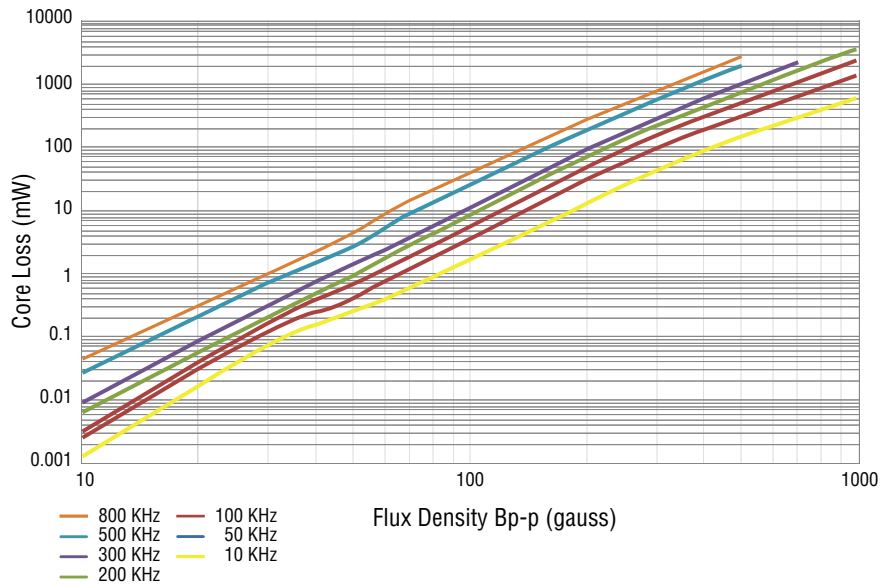


\* RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011. Specifications are subject to change without notice. The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time. Users should verify actual device performance in their specific applications.

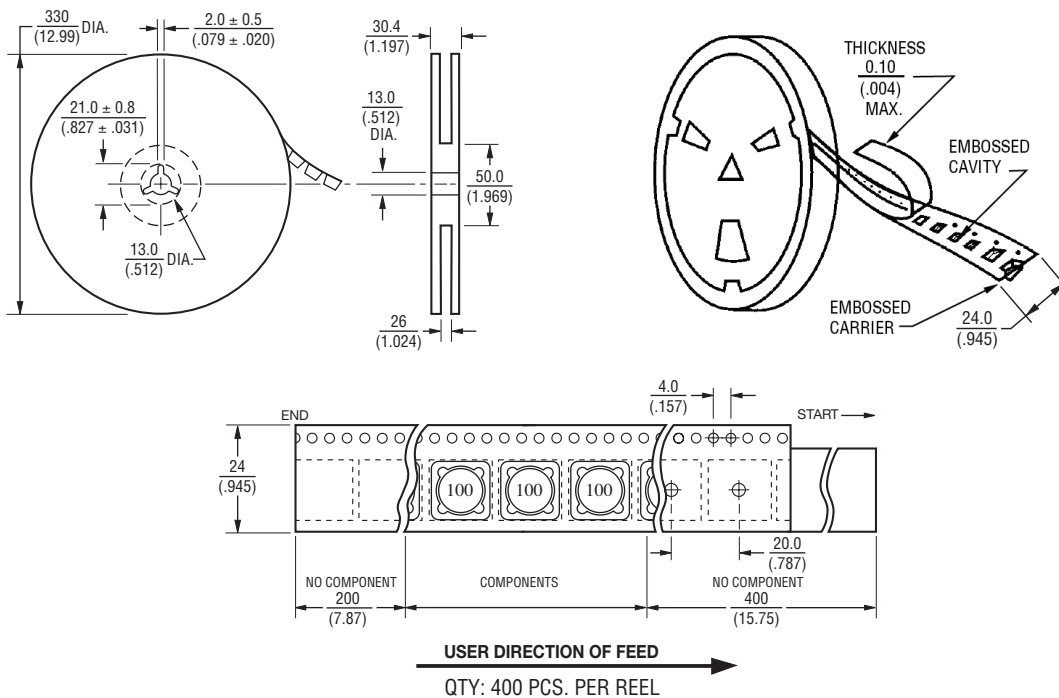
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## Core Loss vs. Flux Density



## Packaging Specifications



REV. 03/18

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