



**THE DATASHEET OF  
SRR1280-6R8Y**





## 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

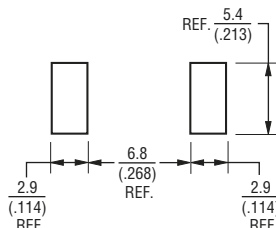
\*\*K-Factor: To calculate core flux density,  $B_p$ -p (gauss) =  $K \times L(\mu\text{H}) \times \Delta I$  (peak-to-peak ripple current, A), determine core loss from *Core Loss vs. Flux Density* plot.

## Electrical Schematic



**WARNING Cancer and Reproductive Harm**  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

## Recommended Layout



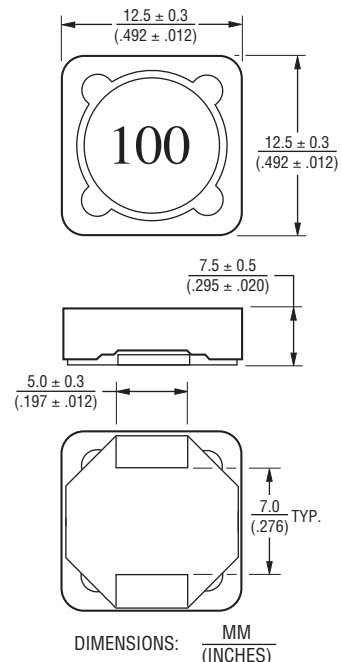
## General Specifications

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



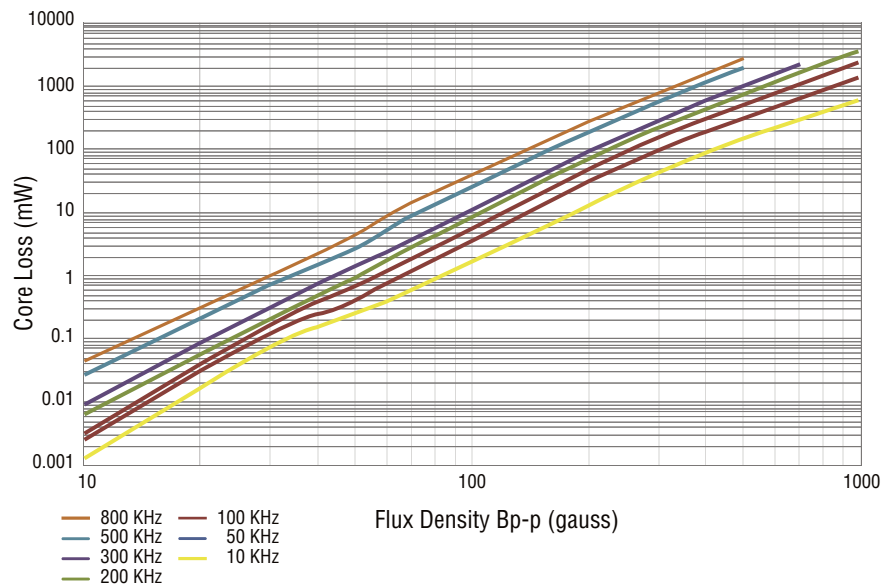
\* RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.

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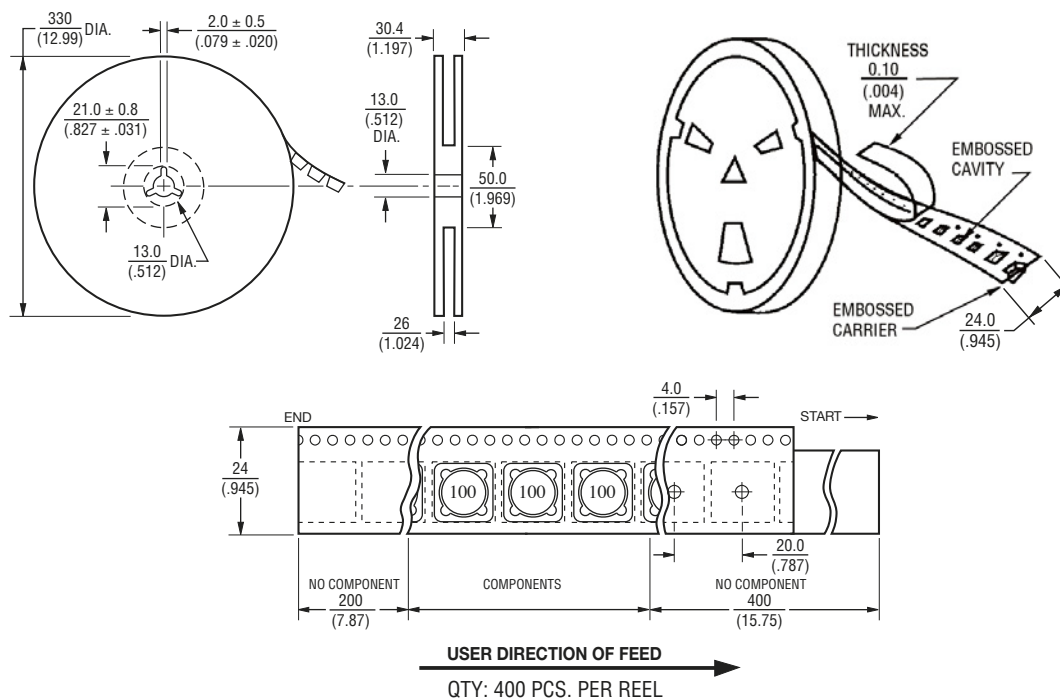
# SRR1280 Series - Shielded SMD Power Inductors



## 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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