



**THE DATASHEET OF  
SRR1210A-3R3Y**





## Features

- Shielded construction
- Inductance range: 1.0 to 1000  $\mu$ H
- Heating current up to 11 A
- Dimensions: 12 x 12 x 10 mm
- AEC-Q200 qualified
- RoHS compliant\* and halogen free\*\*

## SRR1210A Series - Shielded Power Inductors

### Electrical Specifications @ 25 °C

Bourns Part Number	Inductance @ 1 kHz / 0.25 V		Q Ref.	Q Test Freq. (MHz)	SRF (MHz) Typ.	DCR ( $\Omega$ ) Max.	I rms (A)	I sat (A)	***K-Factor
	L ( $\mu$ H)	Tol. (%)							
SRR1210A-1R0Y	1.0	$\pm 30$	10	7.96	85	0.006	11.0	16.5	86
SRR1210A-1R8Y	1.8	$\pm 30$	10	7.96	56	0.075	10.2	13.2	67
SRR1210A-2R2Y	2.2	$\pm 30$	10	7.96	54	0.09	9.5	12.2	55
SRR1210A-3R3Y	3.3	$\pm 30$	15	7.96	44	0.01	9.0	10.5	46
SRR1210A-4R7Y	4.7	$\pm 30$	8	7.96	35	0.012	8.5	9.6	40
SRR1210A-5R6Y	5.6	$\pm 30$	12	7.96	28	0.0135	8.0	8.5	35
SRR1210A-6R8Y	6.8	$\pm 30$	12	7.96	20	0.015	7.85	8.3	32
SRR1210A-8R2Y	8.2	$\pm 30$	11	7.96	16	0.017	7.25	7.55	29
SRR1210A-100M	10	$\pm 20$	16	2.52	12	0.018	6.5	6.5	26
SRR1210A-120M	12	$\pm 20$	14	2.52	18	0.022	6.3	6.1	24
SRR1210A-150M	15	$\pm 20$	16	2.52	10.5	0.032	5.8	5.3	21
SRR1210A-180M	18	$\pm 20$	13	2.52	8	0.035	5.5	5.1	19
SRR1210A-220M	22	$\pm 20$	16	2.52	8	0.038	5.2	4.5	17
SRR1210A-270M	27	$\pm 20$	16	2.52	6.5	0.04	5.0	4.2	15
SRR1210A-330M	33	$\pm 20$	16	2.52	6.5	0.052	4.4	3.7	14
SRR1210A-390M	39	$\pm 20$	16	2.52	4.5	0.066	4.2	3.5	13
SRR1210A-470M	47	$\pm 20$	16	2.52	4.5	0.072	3.8	3.1	12
SRR1210A-560M	56	$\pm 20$	8	2.52	4	0.09	3.4	2.9	11
SRR1210A-680M	68	$\pm 20$	12	2.52	3.8	0.102	3.0	2.7	10
SRR1210A-820M	82	$\pm 20$	15	2.52	3.5	0.112	2.8	2.5	9
SRR1210A-101M	100	$\pm 20$	16	0.796	3	0.135	2.5	2.2	8
SRR1210A-121M	120	$\pm 20$	13	0.796	2.6	0.17	2.3	1.9	7
SRR1210A-151M	150	$\pm 20$	12	0.796	2.2	0.19	2.2	1.8	7
SRR1210A-181M	180	$\pm 20$	14	0.796	1.8	0.25	1.9	1.6	6
SRR1210A-221M	220	$\pm 20$	15	0.796	1.8	0.315	1.7	1.5	5
SRR1210A-271M	270	$\pm 20$	16	0.796	1.8	0.41	1.5	1.3	5
SRR1210A-331M	330	$\pm 20$	14	0.796	1.8	0.45	1.4	1.2	4
SRR1210A-391M	390	$\pm 20$	16	0.796	1.3	0.6	1.3	1.1	4
SRR1210A-471M	470	$\pm 20$	12	0.796	0.85	0.82	1.2	1.0	4
SRR1210A-561M	560	$\pm 20$	12	0.796	0.85	0.9	1.1	0.95	3
SRR1210A-681M	680	$\pm 20$	11	0.796	0.85	1.2	1.0	0.85	3
SRR1210A-821M	820	$\pm 20$	6	0.796	0.85	1.32	0.85	0.75	3
SRR1210A-102M	1000	$\pm 20$	22	0.796	0.85	1.65	0.75	0.7	3

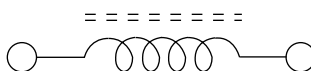
\*\*\*K-Factor: To calculate core flux density,  $B_p$ -p (gauss) =  $K \times L(\mu H) \times \Delta I$  (peak-to-peak ripple current, A), determine core loss from *Core Loss vs. Flux Density* plot.

### How to Order

**SRR1210A - 100M**

Model \_\_\_\_\_  
Value Code (see table) \_\_\_\_\_

### Electrical Schematic



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

\* RoHS Directive 2015/863, Mar 31, 2015 and Annex.

\*\* Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.

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### General Specifications

Operating Temperature ..... -40 °C to +125 °C  
(Temperature rise included)  
Storage Temperature ..... -40 °C to +125 °C  
Temperature Rise ..... 40 °C typ. at rated I rms  
Inductance drop ..... 20 % at I sat

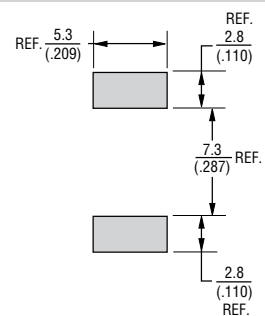
### Materials

Core ..... Ferrite  
Wire ..... Enameled copper  
Terminal Finish ..... Sn  
Packaging ..... 250 pcs. per reel

### Product Dimensions



### Recommended Layout



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

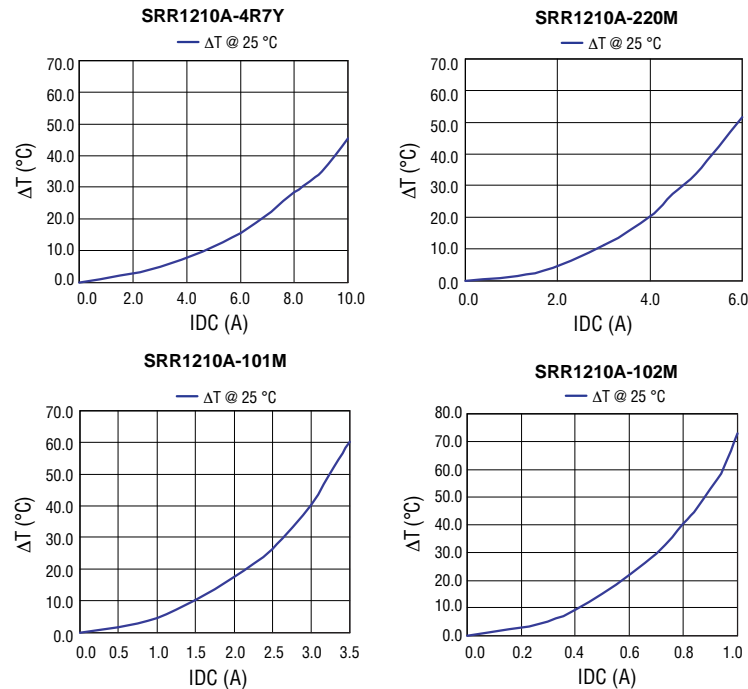
# SRR1210A Series - Shielded Power Inductors



## Inductance vs. IDC



## Temperature Rise vs. IDC



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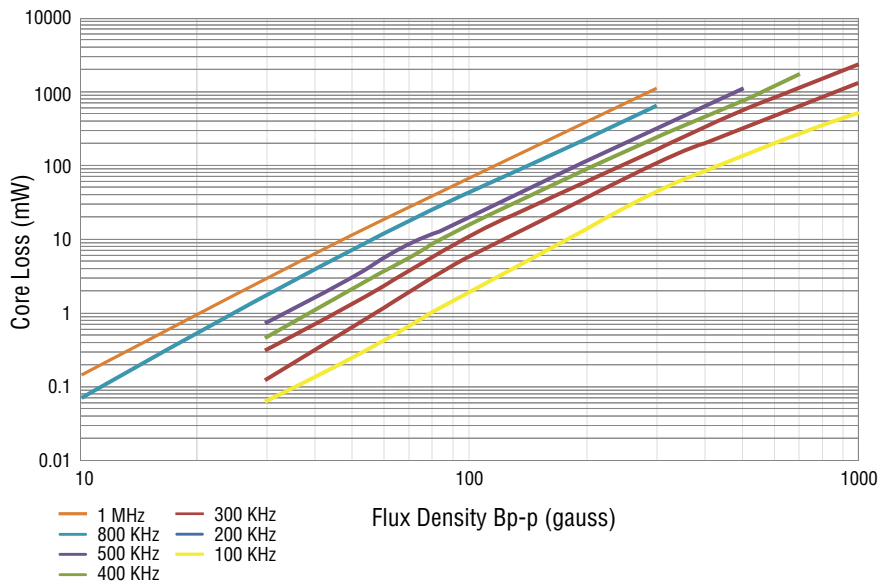
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## Soldering Profile



## Core Loss vs. Flux Density



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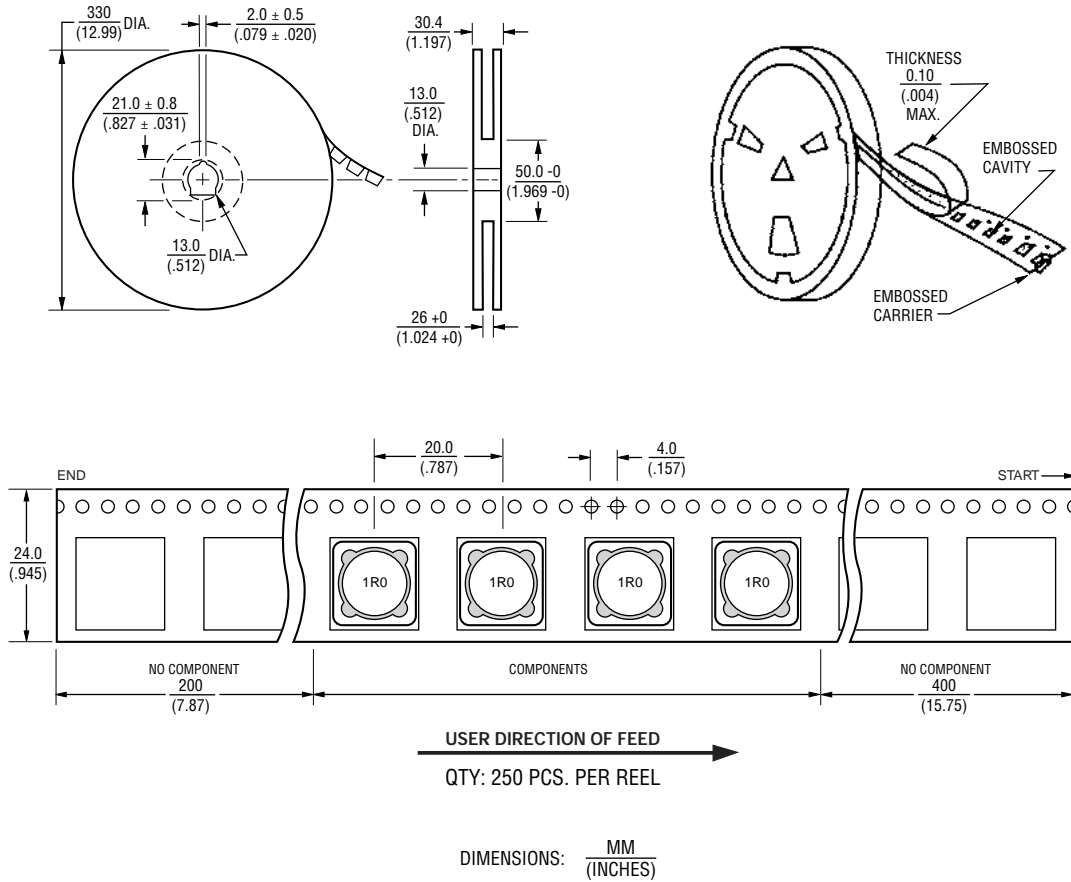
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# SRR1210A Series - Shielded Power Inductors

**BOURNS®**

## Packaging Specifications



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