



**THE DATASHEET OF  
SRR6040A-270M**





## Features

- Shielded construction
- Inductance range: 1.0 to 100  $\mu$ H
- Heating current up to 5 A
- Dimensions: 6.7 x 6.7 x 4 mm
- AEC-Q200 qualified
- RoHS compliant\* and halogen free\*\*

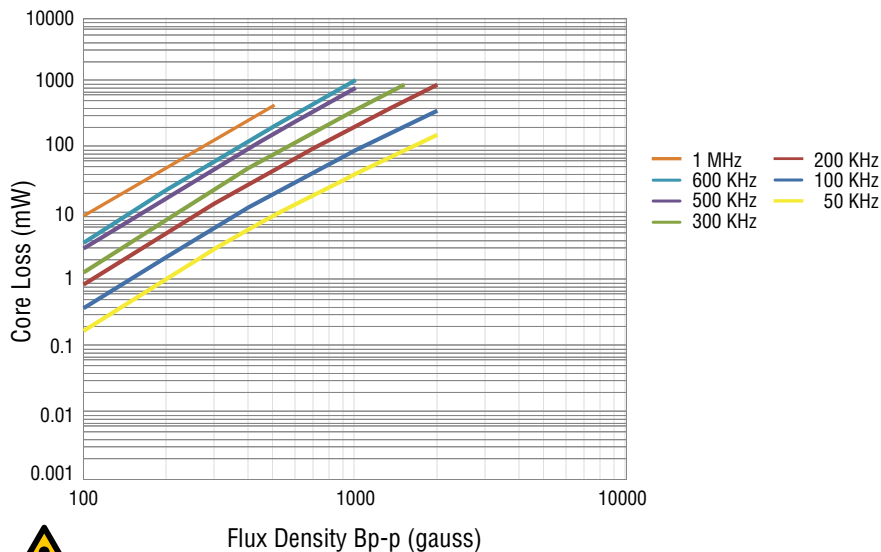
## SRR6040A Series - Shielded Power Inductors

### Electrical Specifications @ 25 °C

Bourns Part Number	Inductance @ 10 kHz / 1 V		DCR ( $\Omega$ ) Typ.	DCR ( $\Omega$ ) Max.	I rms (A)	I sat (A)	***K-Factor
	L ( $\mu$ H)	Tol. (%)					
SRR6040A-1R0Y	1.0	± 30	0.0098	0.015	5.0	5.55	388
SRR6040A-3R0Y	3.0	± 30	0.0153	0.021	3.5	3.33	233
SRR6040A-5R0Y	5.0	± 30	0.0184	0.025	2.9	2.63	184
SRR6040A-6R8Y	6.8	± 30	0.0223	0.03	2.5	2.17	152
SRR6040A-8R2Y	8.2	± 30	0.0266	0.036	2.3	2.0	140
SRR6040A-100M	10	± 20	0.0358	0.05	2.0	1.72	120
SRR6040A-120M	12	± 20	0.0397	0.055	1.7	1.61	113
SRR6040A-150M	15	± 20	0.0428	0.06	1.6	1.51	106
SRR6040A-180M	18	± 20	0.0551	0.075	1.5	1.35	94
SRR6040A-220M	22	± 20	0.0647	0.087	1.3	1.22	85
SRR6040A-270M	27	± 20	0.0769	0.105	1.2	1.11	78
SRR6040A-330M	33	± 20	0.0903	0.12	1.1	1.02	71
SRR6040A-390M	39	± 20	0.103	0.135	1.0	0.94	66
SRR6040A-470M	47	± 20	0.123	0.16	0.95	0.85	59
SRR6040A-560M	56	± 20	0.149	0.19	0.86	0.77	54
SRR6040A-680M	68	± 20	0.187	0.24	0.75	0.7	49
SRR6040A-820M	82	± 20	0.22	0.29	0.7	0.63	44
SRR6040A-101M	100	± 20	0.266	0.345	0.65	0.57	40

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

### Core Loss vs. Flux Density



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

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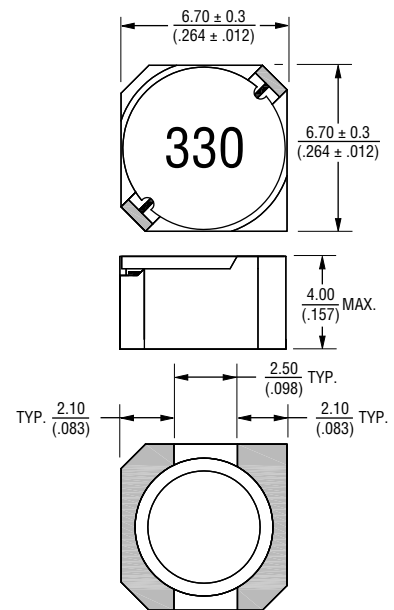
### General Specifications

Operating Temperature ..... -40 °C to +125 °C  
 (Temperature rise included)  
 Storage Temperature ..... -40 °C to +125 °C  
 Resistance to Solder Heat ..... +250°C for 10 sec.  
 Temperature Rise ..... 30 °C typ. at rated Irms  
 Inductance drop ..... 35 % at Isat

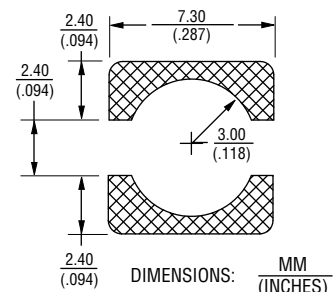
### Materials

Core ..... Ferrite  
 Wire ..... Enameled copper  
 Terminal Finish ..... Sn  
 Packaging ..... 1000 pcs. per reel

### Product Dimensions



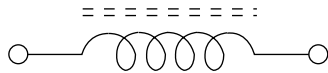
### Recommended Layout



# SRR6040A Series - Shielded Power Inductors

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## Electrical Schematic

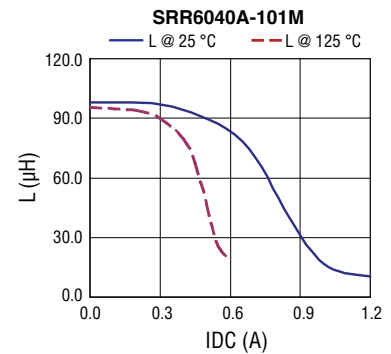
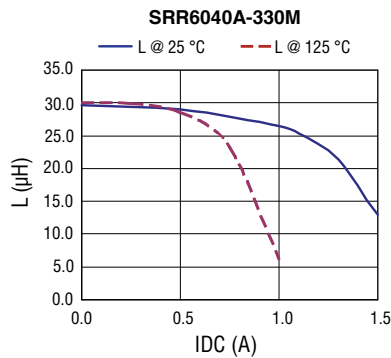
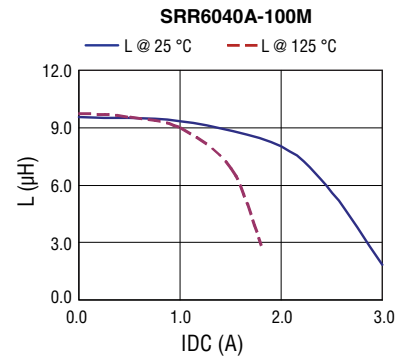
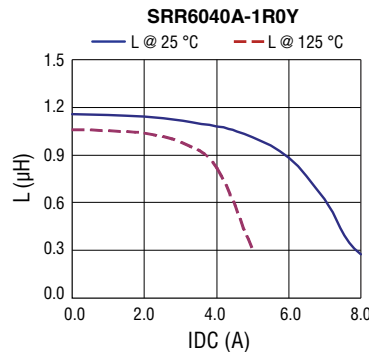


## How to Order

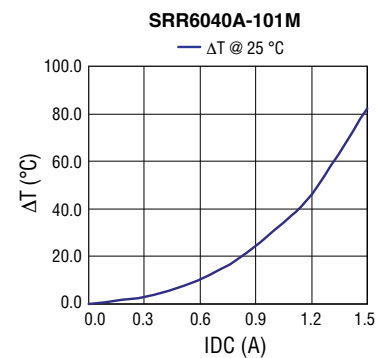
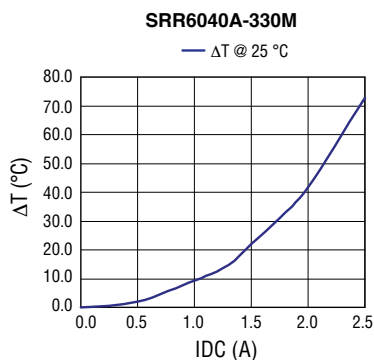
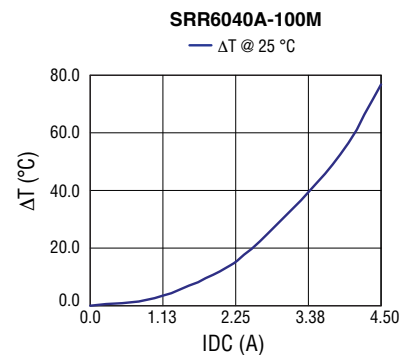
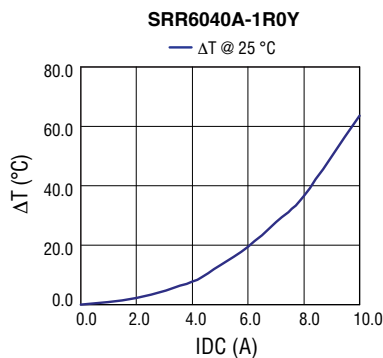
**SRR6040A - 100M**

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

## Inductance vs. IDC



## Temperature Rise vs. IDC



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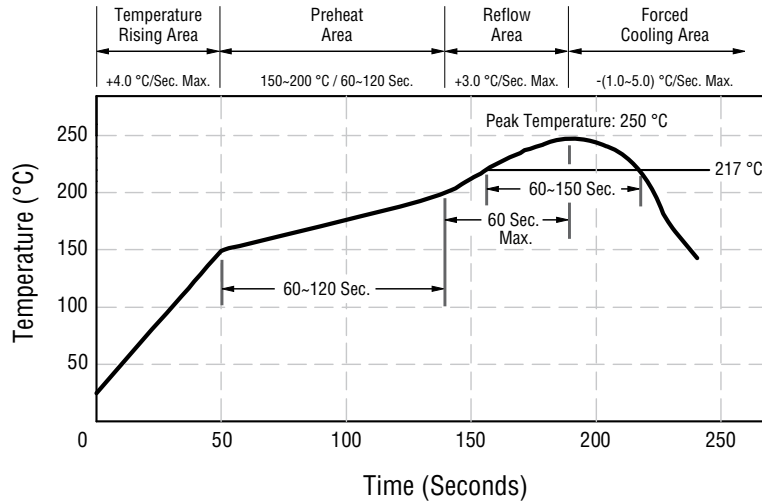
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# SRR6040A Series - Shielded Power Inductors

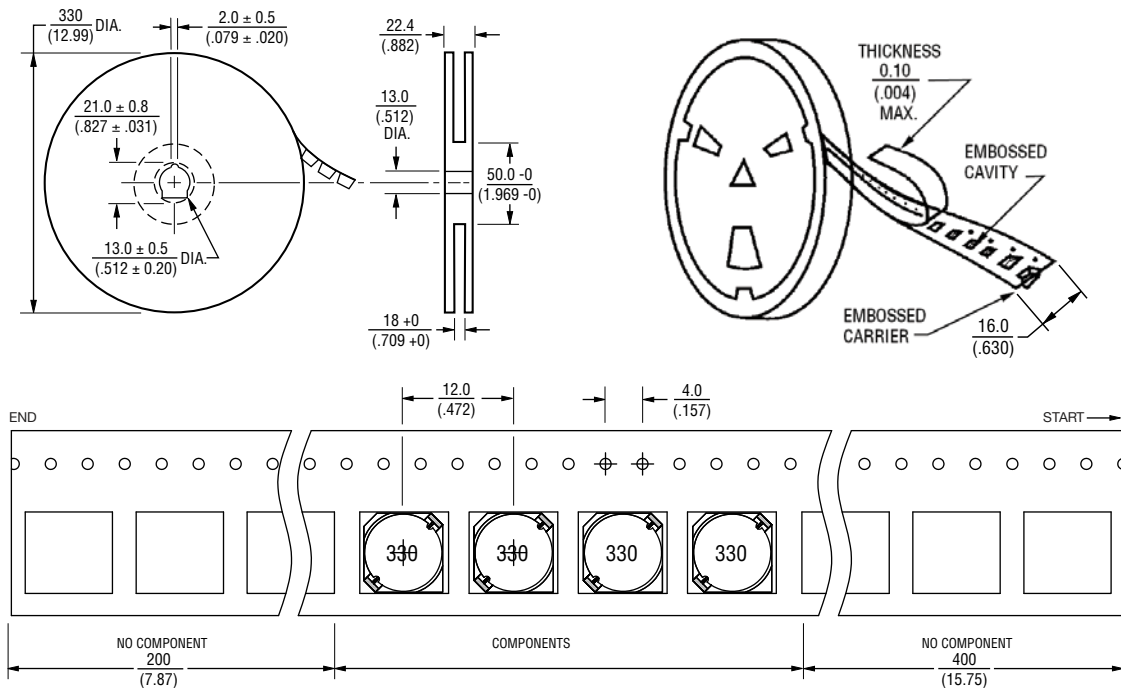
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## Soldering Profile



Peak Temperature: 250 °C max.  
 Max. Peak Temperature -5 °C: 30 sec. max.  
 Max. Time Above 217 °C: 60~150 sec. max.

## Packaging Specifications



USER DIRECTION OF FEED

QTY: 250 PCS. PER REEL

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

REV. 02/17

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