



## Features

- High saturation current - up to 20 A
- Inductance range: 1.5 to 1000  $\mu$ H
- Heating current up to 9.5 A
- AEC-Q200 qualified
- RoHS compliant\* and halogen free\*\*

## Applications

- Automotive systems:
  - Driver assistant
  - Information
  - Entertainment
  - Lighting
- DC/DC converters
- Power supplies

## SDR1307A Series - SMD Power Inductors

### Electrical Specifications @ 25 °C

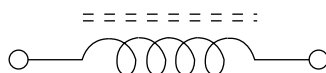
Bourns Part Number	Inductance @ 100 KHz / 0.1 V		Q (Ref.)	Test Freq. (MHz)	SRF (MHz) Typ.	DCR ( $\Omega$ ) Max.	I rms (A)	I sat (A)
	L ( $\mu$ H)	Tol. (%)						
SDR1307A-1R5M	1.5	$\pm 20$	20	7.96	65	0.005	9.5	20
SDR1307A-2R2M	2.2	$\pm 20$	22	7.96	50	0.006	9.0	18
SDR1307A-2R7M	2.7	$\pm 20$	24	7.96	40	0.008	8.2	16
SDR1307A-3R3M	3.3	$\pm 20$	26	7.96	38	0.0087	7.5	15
SDR1307A-4R7M	4.7	$\pm 20$	25	7.96	36	0.01	7.0	13
SDR1307A-5R6M	5.6	$\pm 20$	24	7.96	28	0.015	6.5	11
SDR1307A-6R8M	6.8	$\pm 20$	24	7.96	26	0.017	6.0	10.5
SDR1307A-8R2M	8.2	$\pm 20$	24	7.96	24	0.019	5.8	9.8
SDR1307A-100M	10	$\pm 20$	22	2.52	22	0.021	5.6	9.2
SDR1307A-120M	12	$\pm 20$	25	2.52	20	0.03	4.8	8
SDR1307A-150M	15	$\pm 20$	28	2.52	17	0.034	4.5	7.5
SDR1307A-180M	18	$\pm 20$	28	2.52	16	0.036	4.2	7
SDR1307A-220M	22	$\pm 20$	40	2.52	15	0.047	3.6	6.5
SDR1307A-270M	27	$\pm 20$	35	2.52	11	0.06	3.3	5.5
SDR1307A-330K	33	$\pm 10$	35	2.52	10	0.065	3.1	5
SDR1307A-390K	39	$\pm 10$	28	2.52	9	0.075	2.9	4.6
SDR1307A-470K	47	$\pm 10$	24	2.52	7.5	0.082	2.7	4.2
SDR1307A-560K	56	$\pm 10$	22	2.52	7.2	0.10	2.5	3.8
SDR1307A-680K	68	$\pm 10$	24	2.52	7	0.12	2.3	3.5
SDR1307A-820K	82	$\pm 10$	18	2.52	6	0.14	2.1	3.2
SDR1307A-101K	100	$\pm 10$	25	0.796	5.8	0.18	1.9	3
SDR1307A-121K	120	$\pm 10$	20	0.796	5.5	0.21	1.8	2.8
SDR1307A-151K	150	$\pm 10$	20	0.796	4.5	0.25	1.6	2.6
SDR1307A-181K	180	$\pm 10$	18	0.796	4	0.28	1.5	2.3
SDR1307A-221K	220	$\pm 10$	15	0.796	3.8	0.36	1.3	2.1
SDR1307A-271K	270	$\pm 10$	15	0.796	3.5	0.41	1.2	1.8
SDR1307A-331K	330	$\pm 10$	15	0.796	3.2	0.52	1.1	1.6
SDR1307A-391K	390	$\pm 10$	12	0.796	2.5	0.60	1.0	1.5
SDR1307A-471K	470	$\pm 10$	12	0.796	2.2	0.72	0.9	1.4
SDR1307A-561K	560	$\pm 10$	10	0.796	2	0.88	0.85	1.3
SDR1307A-681K	680	$\pm 10$	10	0.796	1.6	1.0	0.8	1.2
SDR1307A-821K	820	$\pm 10$	10	0.796	1.5	1.3	0.75	1.1
SDR1307A-102K	1000	$\pm 10$	10	0.252	1.4	1.6	0.65	1

### How to Order

**SDR1307A - 100M**

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

### Electrical Schematic



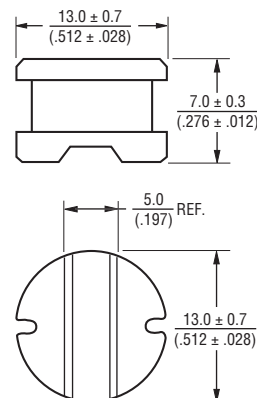
### General Specifications

Operating Temperature ..... -40 °C to +125 °C  
(Temperature rise included)  
Storage Temperature ..... -40 °C to +125 °C  
Resistance to Soldering Heat ..... +245 °C for 10 sec.  
Temperature Rise ..... 40 °C typ. at rated I rms  
Inductance Drop ..... 10 % typ. at I sat

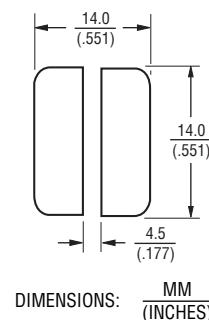
### Materials

Core ..... Ferrite  
Wire ..... Enameled copper  
Terminal Finish ..... Ag/Ni/Sn  
Packaging ..... 400 pcs. per reel

### Product Dimensions



### Recommended Layout



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

\*\* Bourns follows the prevailing definition of "halogen free" in the industry. 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.

Specifications are subject to change without notice.

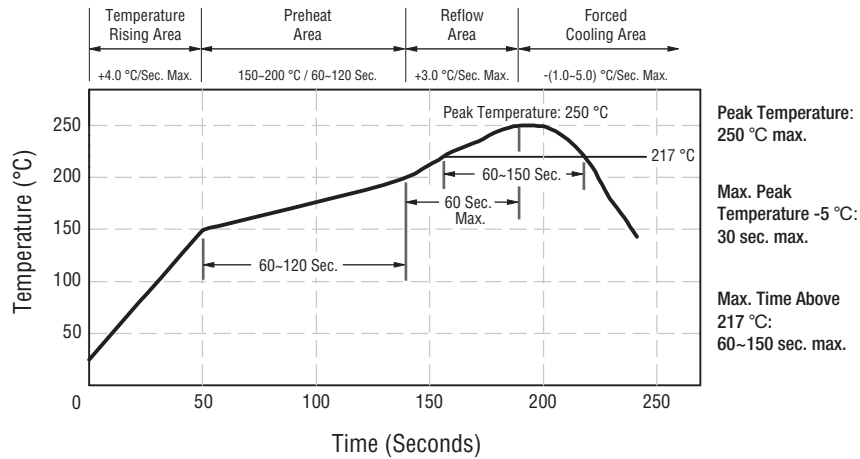
The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.

Users should verify actual device performance in their specific applications.

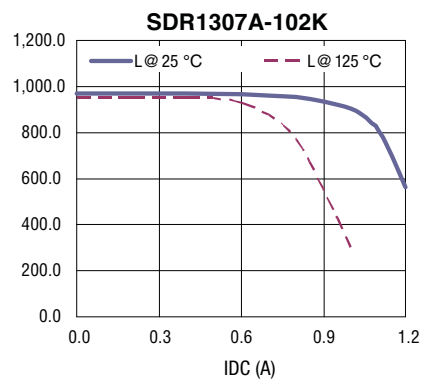
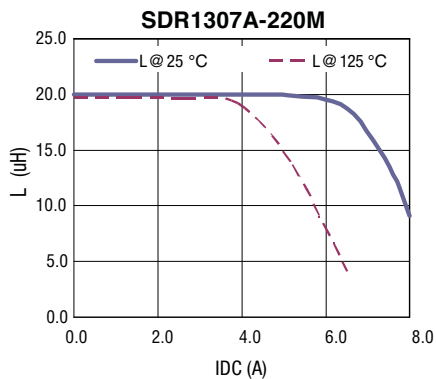
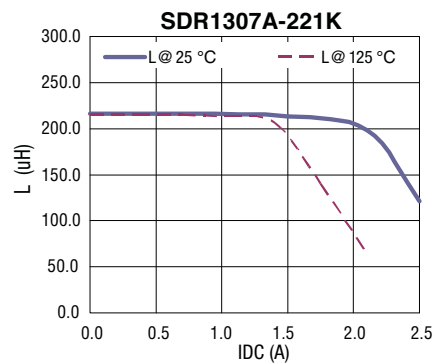
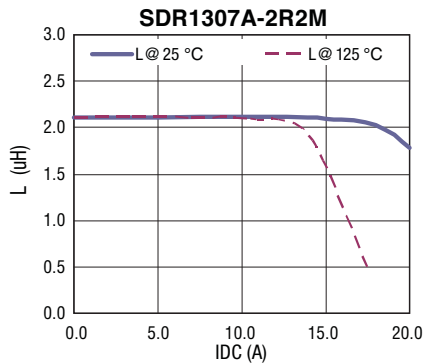
# SDR1307A Series - SMD Power Inductors

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## Soldering Profile



## L vs. IDC

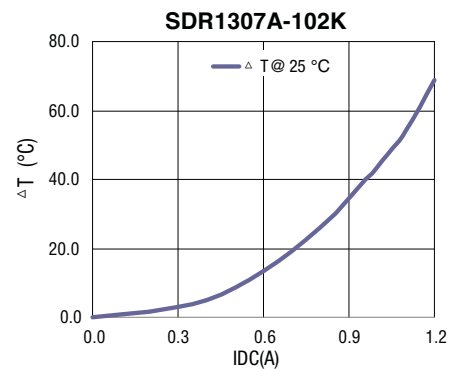
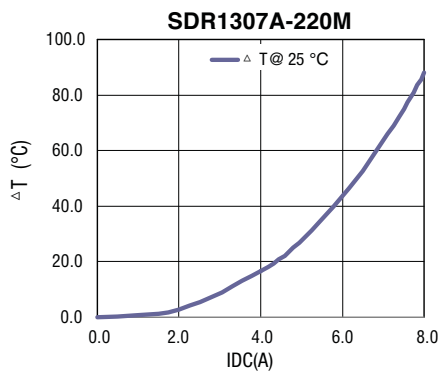
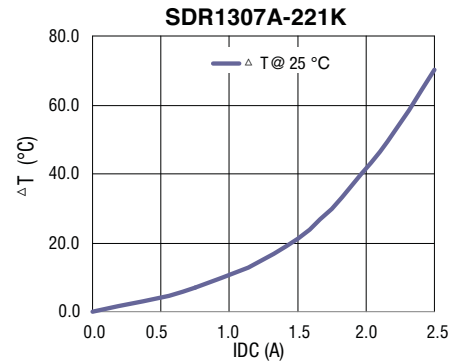
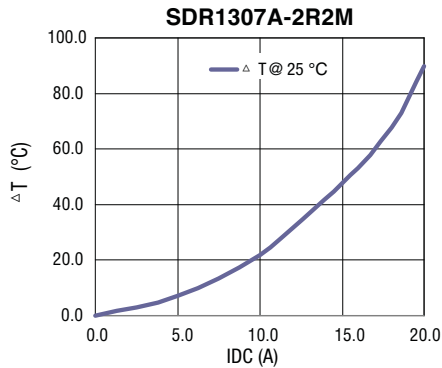


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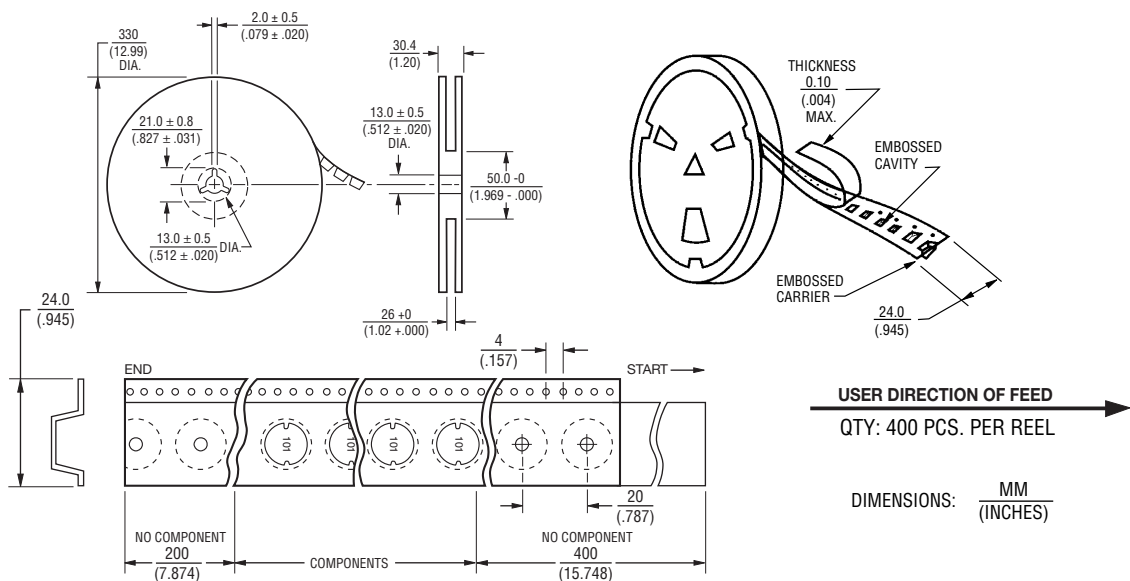
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## Temperature vs. IDC



## Packaging Specifications



REV. 09/13

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