



**THE DATASHEET OF  
SDR1307A-121K**



RoHS COMPLIANT  
& RECC-Q200 QUALIFIED



**BOURNS®**

## 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

- DC/DC converters
- Power supplies

# SDR1307A Series - SMD Power Inductors

### Electrical Specifications @ 25 °C

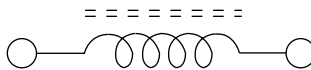
Bourns Part Number	Inductance @ 100 KHz / 0.1 V		Q (Ref.)	Test Freq. (MHz)	SRF (MHz) Typ.	DCR ( $\Omega$ ) Max.	I rms (A)	I sat (A)
	L ( $\mu$ H)	Tol. (%)						
SDR1307A-1R5M	1.5	$\pm 20$	20	7.96	65	0.005	9.5	20
SDR1307A-2R2M	2.2	$\pm 20$	22	7.96	50	0.006	9.0	18
SDR1307A-2R7M	2.7	$\pm 20$	24	7.96	40	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



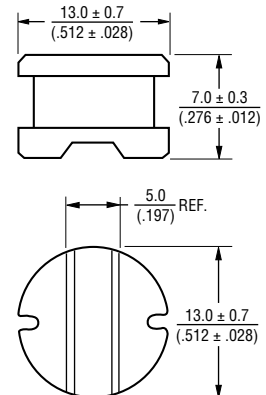
### General Specifications

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

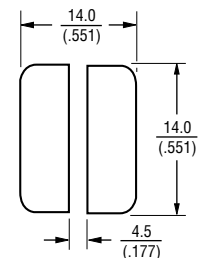
### Materials

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

### Product Dimensions



### Recommended Layout



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

\* 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.

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

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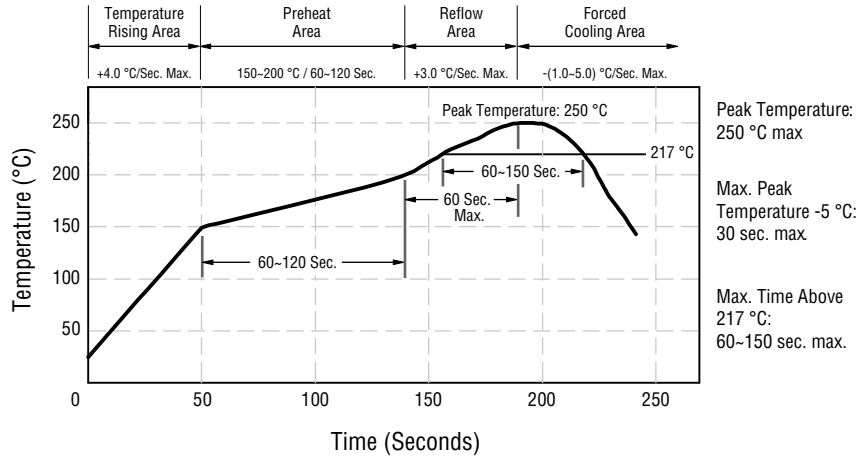


**WARNING**  
Cancer and Reproductive Harm  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

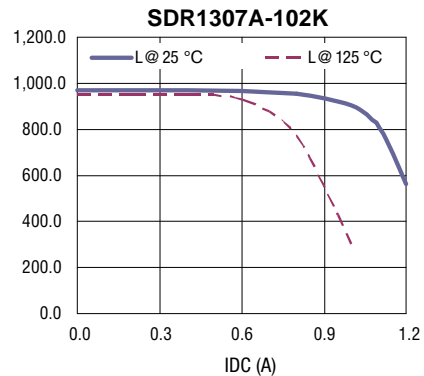
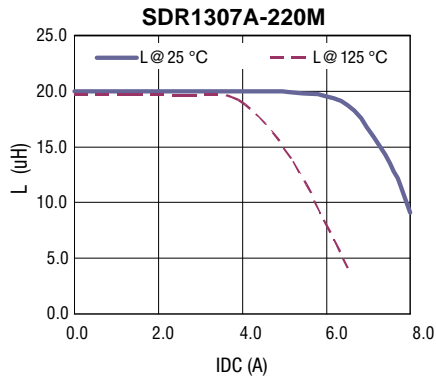
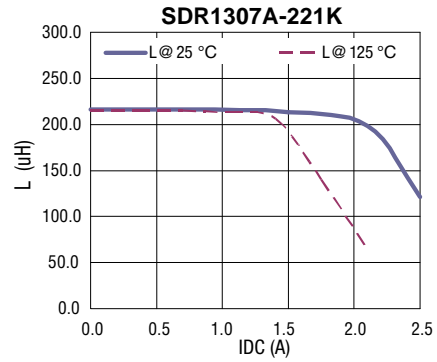
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## Soldering Profile



## L vs. IDC



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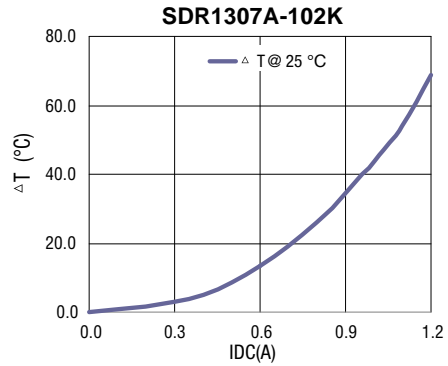
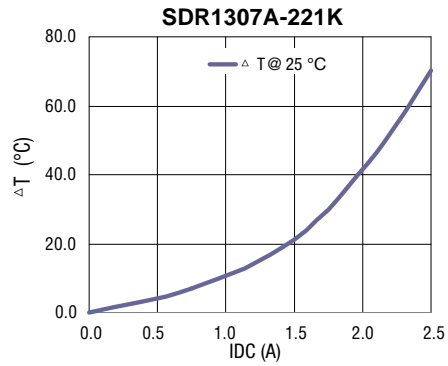
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# SDR1307A Series - SMD Power Inductors



## Temperature vs. IDC



## Packaging Specifications



REV. 11/19

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