



**THE DATASHEET OF
SDR1307A-820K**



RoHS COMPLIANT
& RECC-Q200 QUALIFIED



BOURNS®

Features

- High saturation current - up to 20 A
- Inductance range: 1.5 to 1000 μ 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

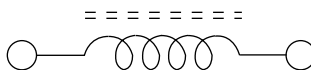
Bourns Part Number	Inductance @ 100 KHz / 0.1 V		Q (Ref.)	Test Freq. (MHz)	SRF (MHz) Typ.	DCR (Ω) Max.	I rms (A)	I sat (A)
	L (μ H)	Tol. (%)						
SDR1307A-1R5M	1.5	\pm 20	20	7.96	65	0.005	9.5	20
SDR1307A-2R2M	2.2	\pm 20	22	7.96	50	0.006	9.0	18
SDR1307A-2R7M	2.7	\pm 20	24	7.96	40	0.008	8.2	16
SDR1307A-3R3M	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



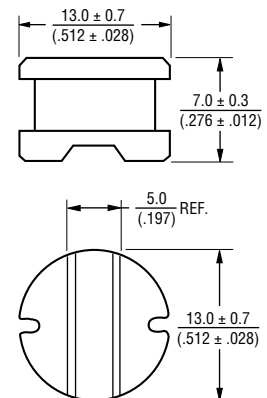
General Specifications

Operating Temperature-40 °C to +125 °C
(Temperature rise included)
Storage Temperature-40 °C to +125 °C
Temperature Rise40 °C typ. at rated I rms
Inductance Drop 10 % typ. at I sat

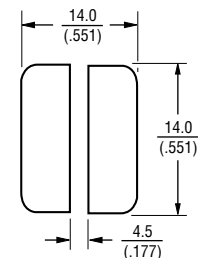
Materials

CoreFerrite
WireEnameled copper
Terminal FinishAg/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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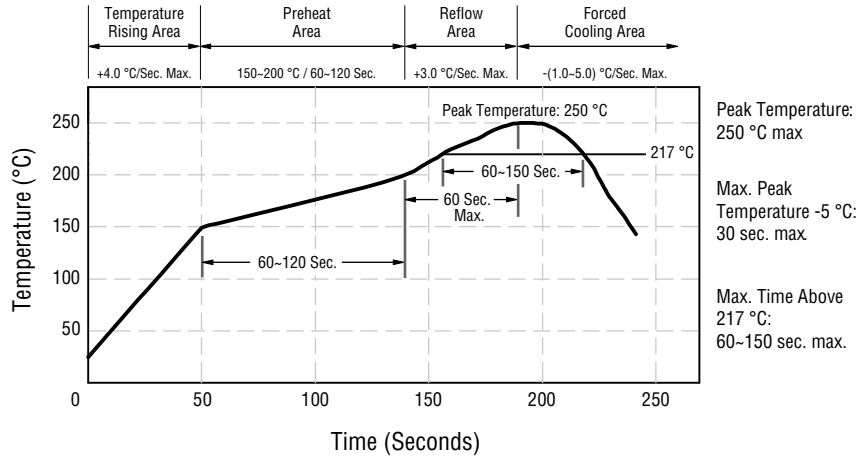


WARNING
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

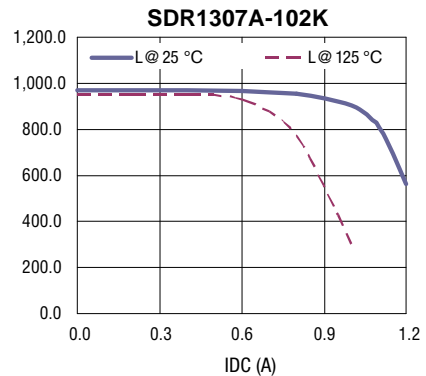
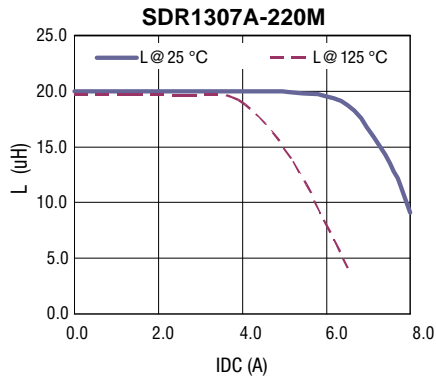
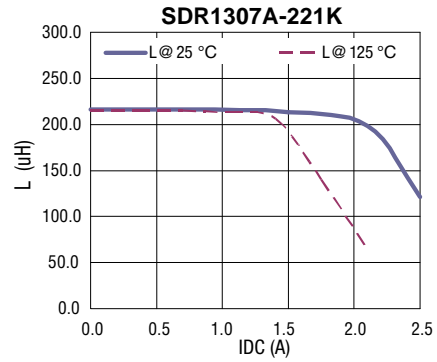
SDR1307A Series - SMD Power Inductors

BOURNS®

Soldering Profile



L vs. IDC



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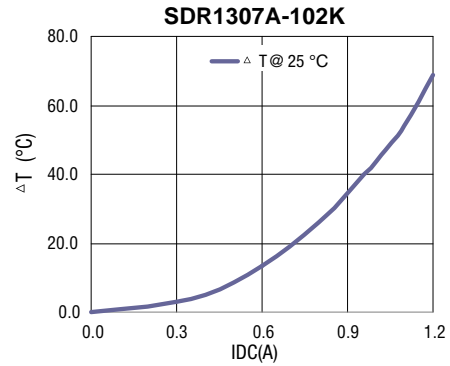
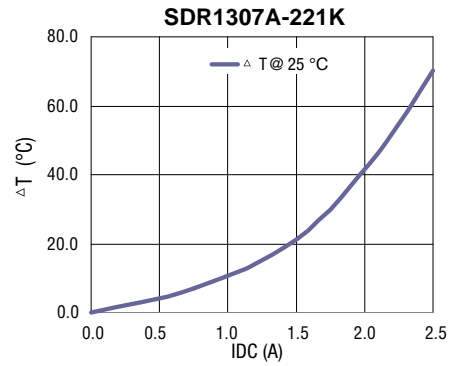
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SDR1307A Series - SMD Power Inductors



Temperature vs. IDC



Packaging Specifications



REV. 11/19

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