



**THE DATASHEET OF
SDR1307A-330K**



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

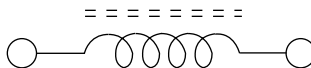
| Bourns Part Number | Inductance @ 100 KHz / 0.1 V | | Q (Ref.) | Test Freq. (MHz) | SRF (MHz) Typ. | DCR (Ω) Max. | I rms (A) | I sat (A) |
|--------------------|------------------------------|----------|----------|------------------|----------------|-----------------------|-----------|-----------|
| | 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



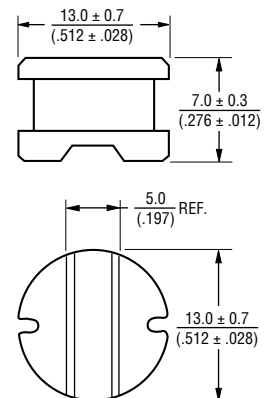
General Specifications

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

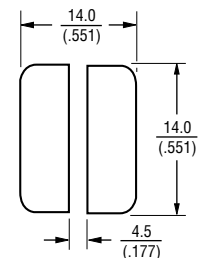
Materials

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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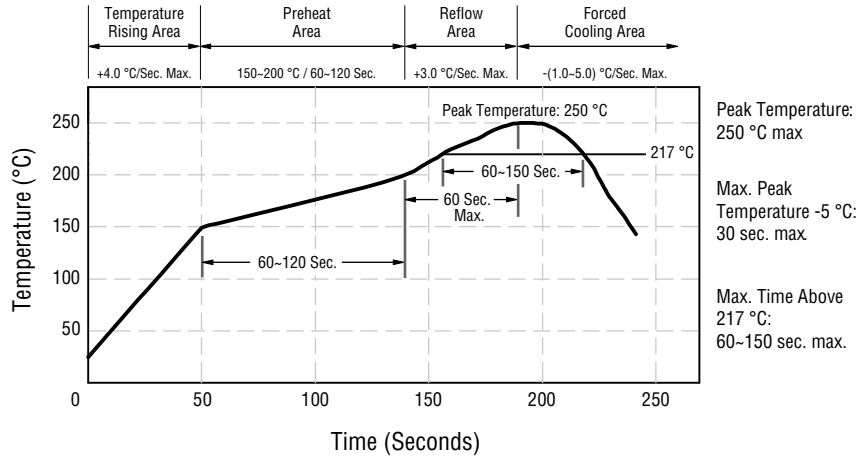


WARNING
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

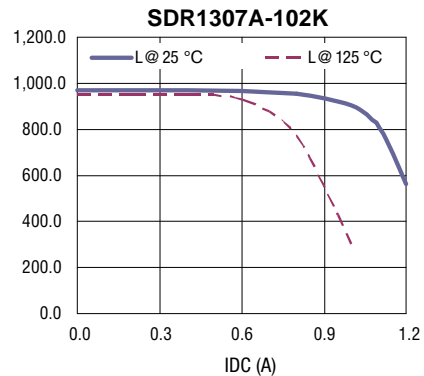
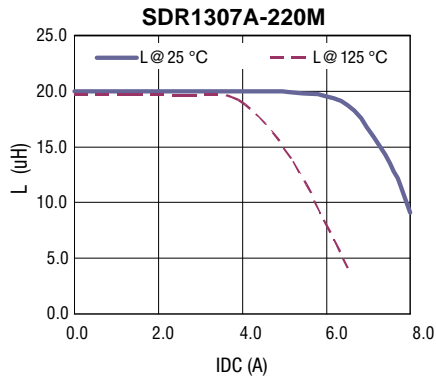
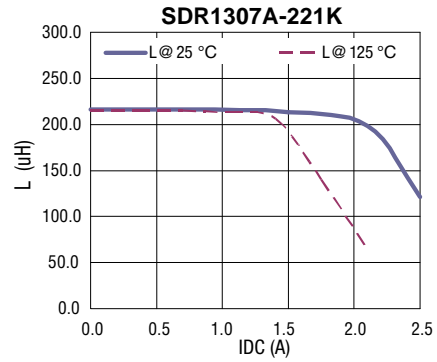
SDR1307A Series - SMD Power Inductors

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Soldering Profile



L vs. IDC



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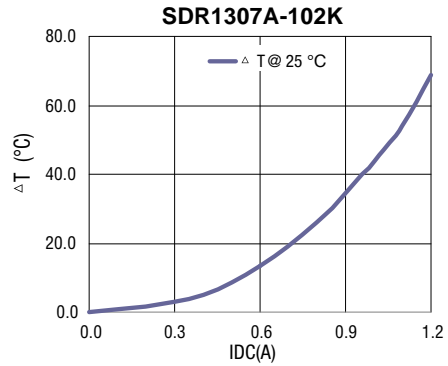
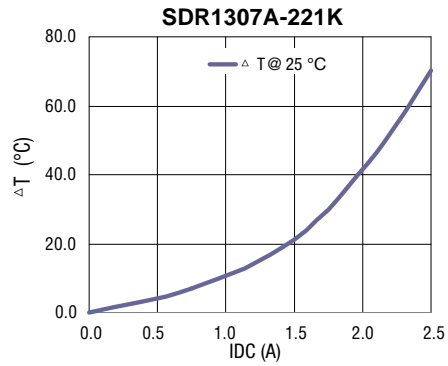
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SDR1307A Series - SMD Power Inductors



Temperature vs. IDC



Packaging Specifications



REV. 11/19

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