



Features

- High saturation current
- Inductance range: 1.0 to 68 μ H
- Heating current up to 2.7 A
- Dimensions: 4.5 x 4 x 3.2 mm
- AEC-Q200 qualified
- RoHS compliant* and halogen free**

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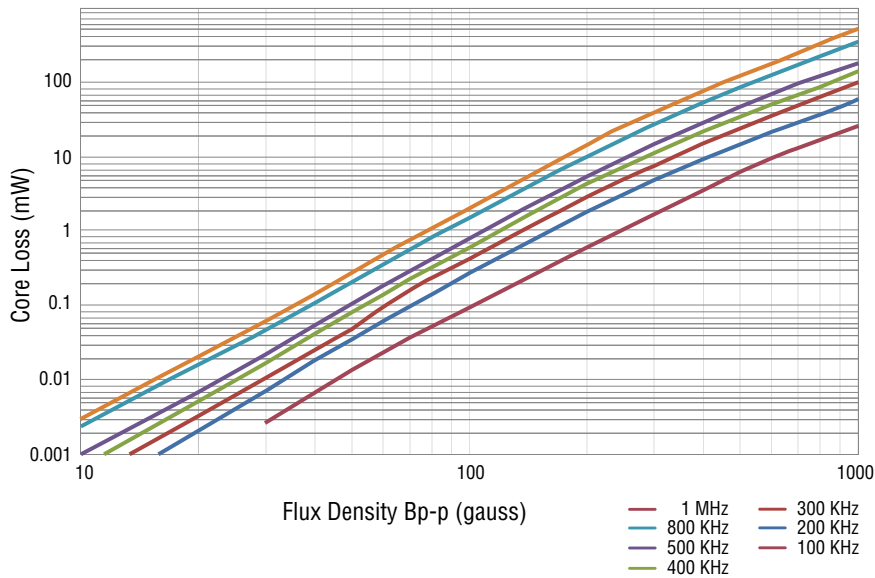
SDE0403A Series - SMD Power Inductors

Electrical Specifications @ 25 °C

| Bourns Part Number | Inductance | | SRF (MHz) Typ. | DCR (Ω) Typ. | DCR (Ω) Max. | I rms (A) | I sat (A) | ***K-Factor |
|--------------------|--------------|----------|----------------|-----------------------|-----------------------|-----------|-----------|-------------|
| | L (μ H) | Tol. (%) | | | | | | |
| SDE0403A-1R0M | 1.0 | ± 20 | 113 | 0.0193 | 0.048 | 2.7 | 4.8 | 490 |
| SDE0403A-2R2M | 2.2 | ± 20 | 76 | 0.0318 | 0.071 | 2.3 | 3.3 | 335 |
| SDE0403A-3R3M | 3.3 | ± 20 | 64 | 0.0469 | 0.086 | 2.0 | 2.5 | 255 |
| SDE0403A-4R7M | 4.7 | ± 20 | 50 | 0.0645 | 0.108 | 1.65 | 2.2 | 220 |
| SDE0403A-6R8M | 6.8 | ± 20 | 41 | 0.0936 | 0.126 | 1.45 | 1.7 | 182 |
| SDE0403A-8R2M | 8.2 | ± 20 | 38 | 0.106 | 0.142 | 1.4 | 1.6 | 163 |
| SDE0403A-100M | 10 | ± 20 | 36 | 0.127 | 0.172 | 1.05 | 1.4 | 148 |
| SDE0403A-120M | 12 | ± 20 | 32 | 0.146 | 0.197 | 1.0 | 1.3 | 135 |
| SDE0403A-150M | 15 | ± 20 | 29 | 0.192 | 0.259 | 0.85 | 1.2 | 120 |
| SDE0403A-180M | 18 | ± 20 | 28 | 0.237 | 0.309 | 0.75 | 1.1 | 112 |
| SDE0403A-220M | 22 | ± 20 | 25 | 0.27 | 0.351 | 0.7 | 0.95 | 98 |
| SDE0403A-270M | 27 | ± 20 | 22 | 0.322 | 0.419 | 0.65 | 0.85 | 90 |
| SDE0403A-330K | 33 | ± 10 | 20 | 0.373 | 0.485 | 0.6 | 0.8 | 83 |
| SDE0403A-390K | 39 | ± 10 | 18 | 0.449 | 0.561 | 0.55 | 0.7 | 75 |
| SDE0403A-470K | 47 | ± 10 | 16 | 0.505 | 0.631 | 0.5 | 0.65 | 68 |
| SDE0403A-560K | 56 | ± 10 | 15 | 0.736 | 0.92 | 0.45 | 0.6 | 62 |
| SDE0403A-680K | 68 | ± 10 | 13 | 0.822 | 1.028 | 0.4 | 0.55 | 56 |

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

Core Loss vs. Flux Density



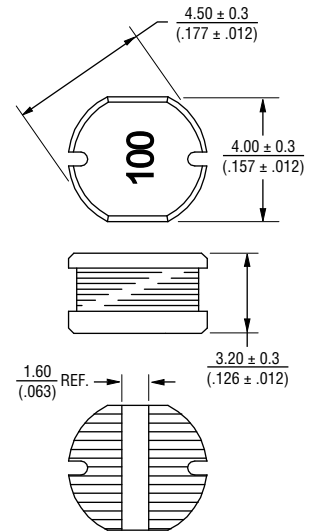
General Specifications

Test Frequency / Voltage 1 MHz / 1 V
 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}

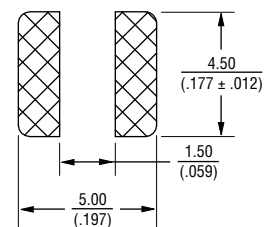
Materials

Core Ferrite
 Wire Enameled copper
 Terminal Finish Sn
 Packaging 2000 pcs. per reel

Product Dimensions



Recommended Layout



* 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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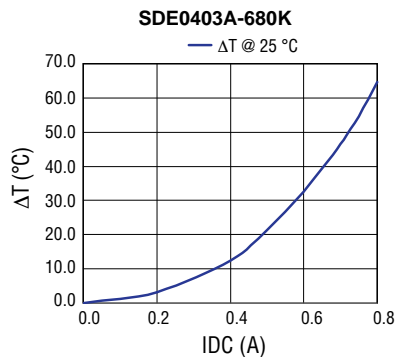
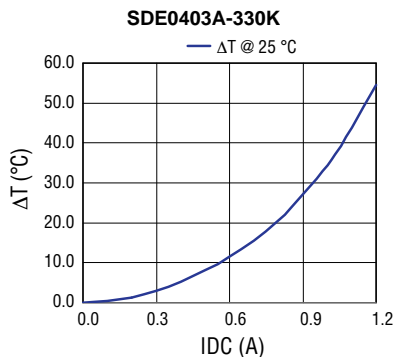
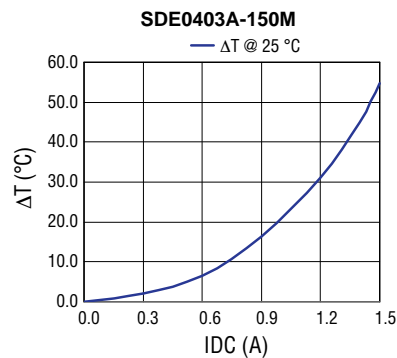
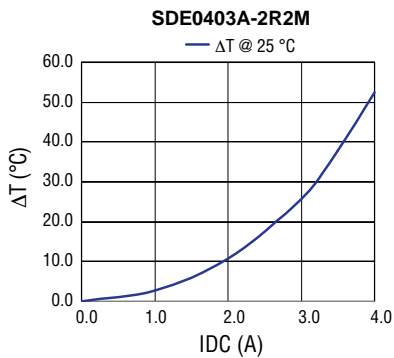
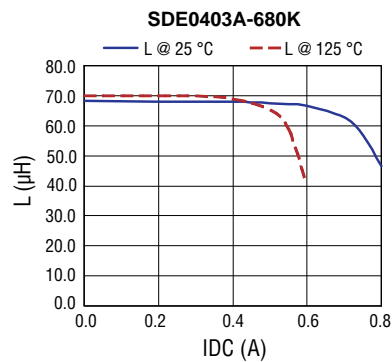
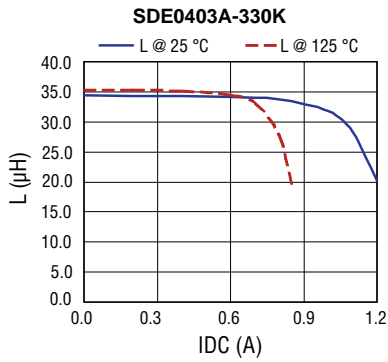
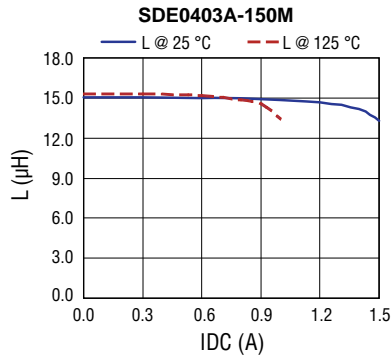
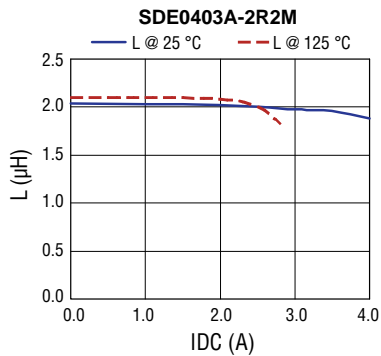


WARNING
 Cancer and Reproductive Harm
www.P65Warnings.ca.gov

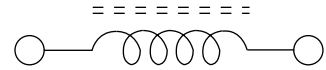
SDE0403A Series - SMD Power Inductors

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Inductance vs. IDC



Electrical Schematic



How to Order

SDE0403A - 100M

Model _____

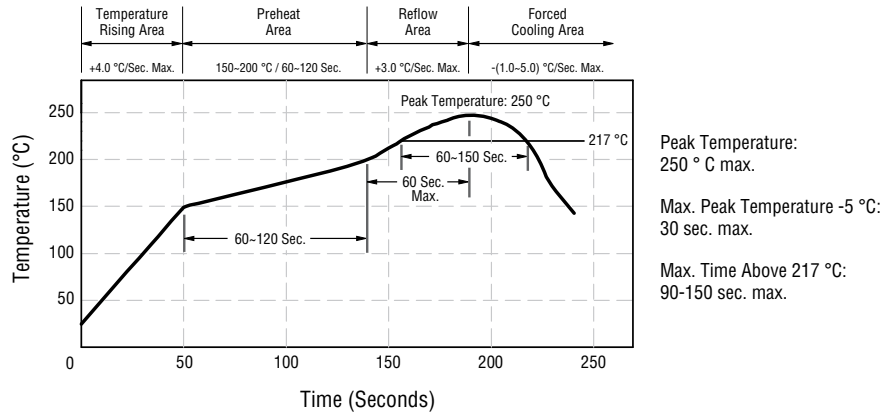
Value Code (see table) _____

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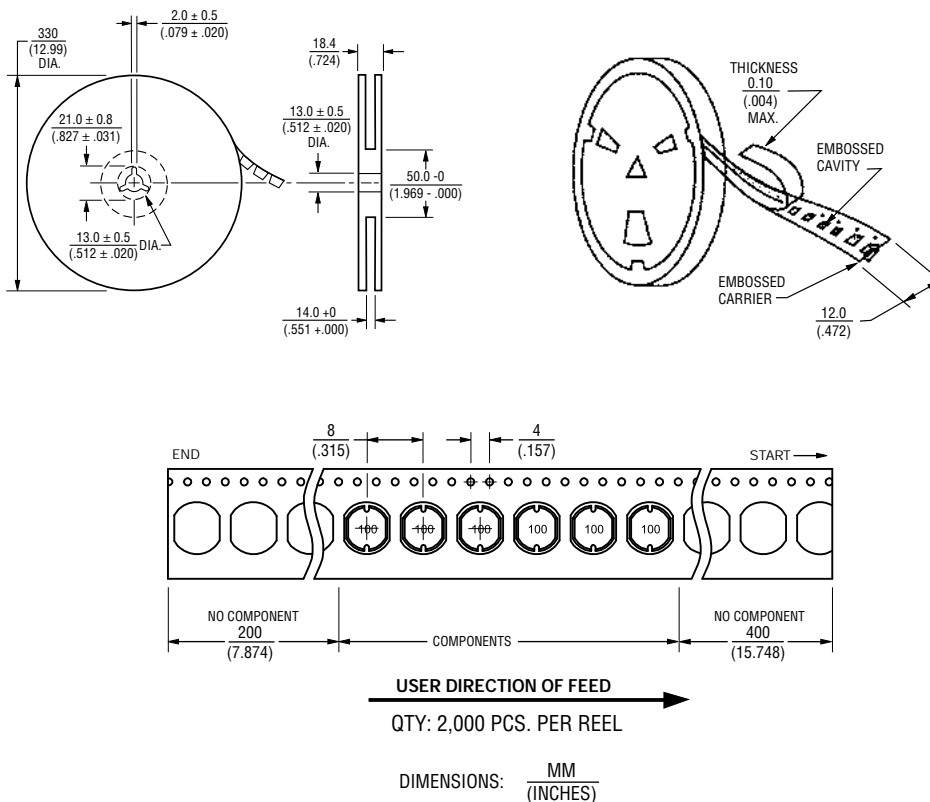
SDE0403A Series - SMD Power Inductors



Soldering Profile



Packaging Specifications



REV. 11/19

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