




**THE DATASHEET OF
SDE6603-680M**





Features

- Unit height of 2.9 mm
- Inductance range: 1 to 1000 μ H
- Rated current up to 2.9 A
- RoHS compliant*

 This series is currently available but not recommended for new designs. The [SDR6603 Series](#) is a possible replacement - see [Product Obsolescence Memo](#) for more info.

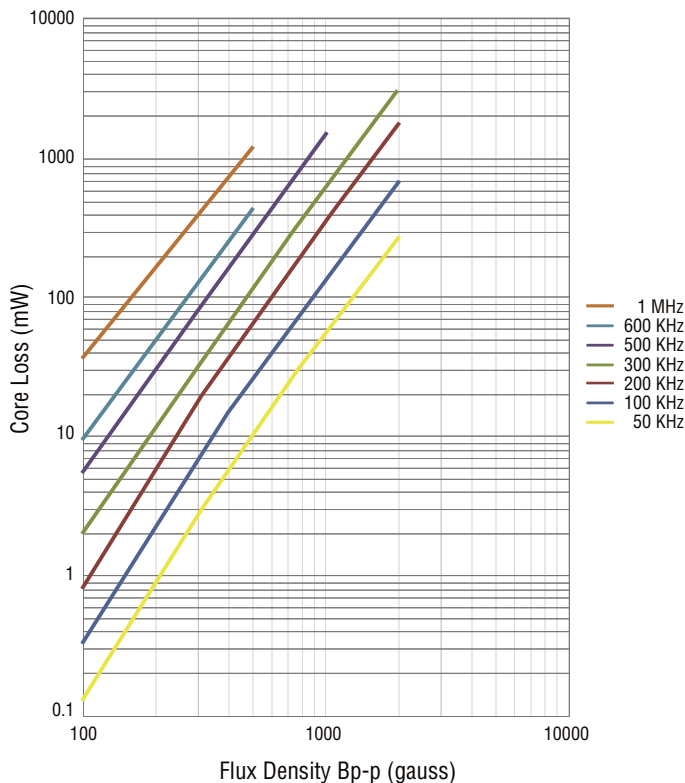
SDE6603 Series - SMD Power Inductors

Electrical Characteristics

| Bourns Part No. | Inductance @ 100KHz L (μ H) \pm 20 % | SRF (MHz) Typ. | DCR (Ω) Max. | I rms (A) | I sat (A) | **K-Factor |
|-----------------|---|----------------|-----------------------|-----------|-----------|------------|
| SDE6603-1R0M | 1.0 | 130 | 0.05 | 2.9 | 2.9 | 1000 |
| SDE6603-1R5M | 1.5 | 115 | 0.06 | 2.8 | 2.6 | 867 |
| SDE6603-2R2M | 2.2 | 90 | 0.07 | 2.4 | 2.3 | 684 |
| SDE6603-3R3M | 3.3 | 70 | 0.08 | 2.0 | 2.0 | 520 |
| SDE6603-4R7M | 4.7 | 50 | 0.09 | 1.5 | 1.5 | 448 |
| SDE6603-6R8M | 6.8 | 45 | 0.13 | 1.4 | 1.2 | 371 |
| SDE6603-100M | 10 | 35 | 0.16 | 1.1 | 1.1 | 302 |
| SDE6603-150M | 15 | 30 | 0.23 | 1.0 | 0.9 | 245 |
| SDE6603-220M | 22 | 20 | 0.37 | 0.8 | 0.7 | 200 |
| SDE6603-330M | 33 | 15 | 0.51 | 0.6 | 0.58 | 160 |
| SDE6603-470M | 47 | 14 | 0.64 | 0.5 | 0.5 | 137 |
| SDE6603-680M | 68 | 11 | 0.86 | 0.4 | 0.4 | 70 |
| SDE6603-101M | 100 | 9 | 1.27 | 0.3 | 0.31 | 57 |
| SDE6603-151M | 150 | 6 | 2.0 | 0.25 | 0.27 | 45 |
| SDE6603-221M | 220 | 5.5 | 3.11 | 0.2 | 0.22 | 38 |
| SDE6603-331M | 330 | 5 | 3.8 | 0.16 | 0.18 | 30 |
| SDE6603-471M | 470 | 4 | 5.06 | 0.15 | 0.16 | 26 |
| SDE6603-681M | 680 | 3 | 9.2 | 0.12 | 0.14 | 22 |
| SDE6603-102M | 1000 | 2 | 13.8 | 0.07 | 0.1 | 18 |

**K-Factor: To calculate core flux density, Bp-p (gauss) = K x L(μ H) x Δ I (peak-to-peak ripple current, A), determine core loss from *Core Loss vs. Flux Density* plot.

Core Loss vs. Flux Density



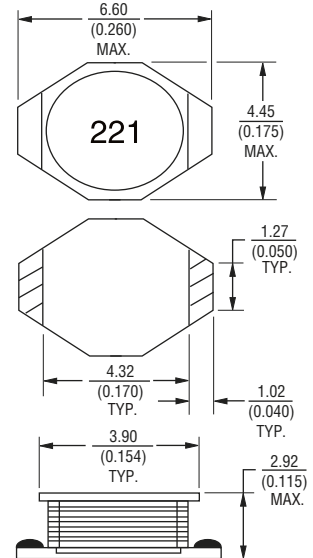
General Specifications

Test Voltage 0.1 V
 Reflow Soldering 230 °C, 50 sec max.
 Operating Temperature...-25 °C to +105 °C
 (Temperature rise included)
 Storage Temperature.....-40 °C to +125 °C
 Resistance to Soldering Heat
 260 °C for 10 sec.
 Moisture Sensitivity Level..... 1
 ESD Classification (HBM)..... N/A

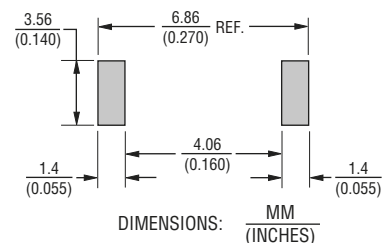
Materials

Core Ferrite
 Wire Enameled copper
 Base Ceramic
 Adhesive Epoxy resin
 Terminal Ag/Ni/Au
 Rated Current.. Ind. drop of 10 % typ. at Isat
 Temperature Rise 40 °C typical at Irms
 Packaging..... 2000 pcs. per 13-inch reel

Product Dimensions



Recommended Layout



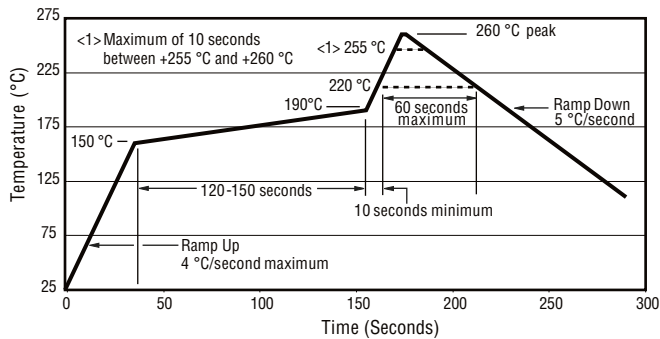
WARNING Cancer and Reproductive Harm
www.P65Warnings.ca.gov

*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.
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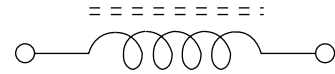
SDE6603 Series - SMD Power Inductors

BOURNS®

Soldering Profile



Schematic

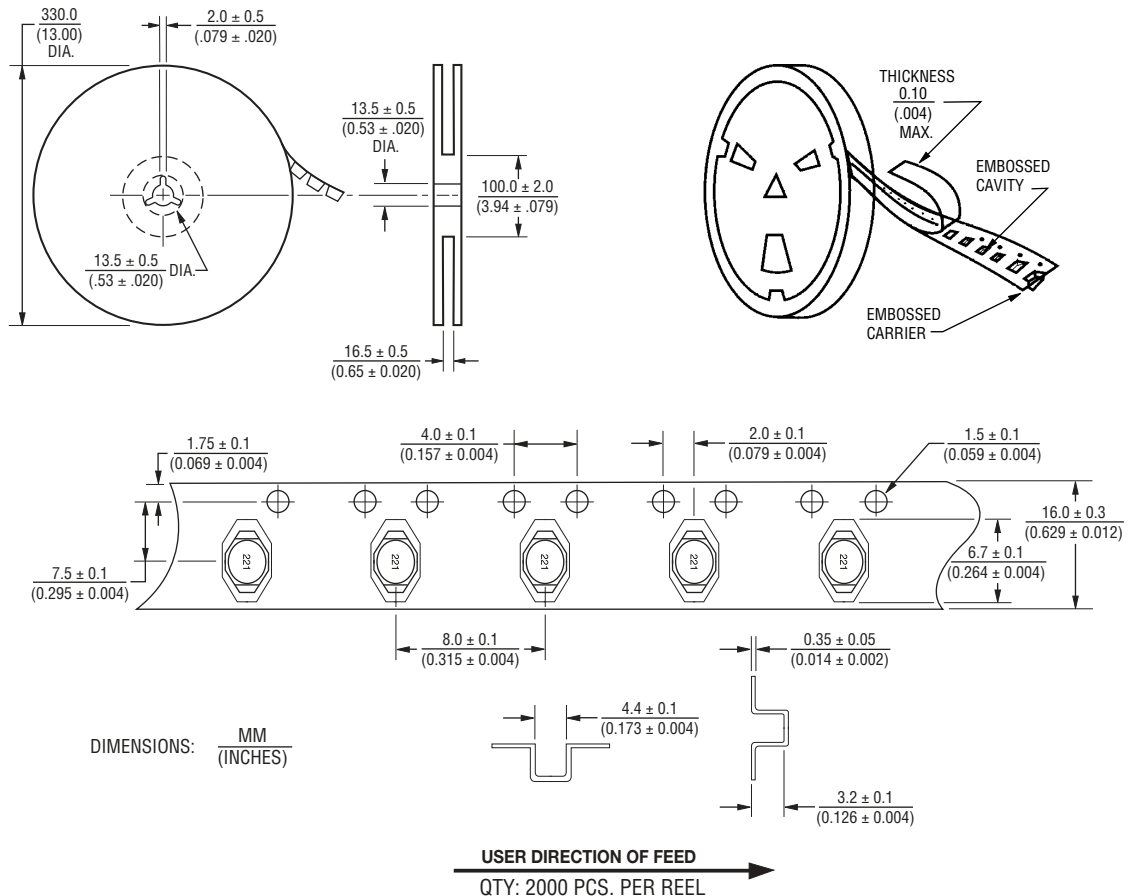


How to Order

SDE6603 - 100M

Model _____
Value Code (see table) _____

Packaging Specifications



REV. 03/18

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

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