



## Features

- Available in E12 series
- Small design of only 5.8 mm maximum diameter
- Low 3.9 mm profile
- RoHS compliant\*

## Applications

- Input/output of DC/DC converters
- Power supplies for:
  - Portable communication equipment
  - Camcorders
  - LCD TVs
  - Car radios

# SDR0603 Series - SMD Power Inductors

## Electrical Specifications

| Bourns Part No. | Inductance 1kHz |        | Q Ref. | Test Frequency (MHz) | SRF Min. (MHz) | RDC (Ω) | I rms Max. (A) | I sat Typ. (A) |
|-----------------|-----------------|--------|--------|----------------------|----------------|---------|----------------|----------------|
|                 | (μH)            | Tol. % |        |                      |                |         |                |                |
| SDR0603-1R5ML   | 1.5             | ± 20   | 24     | 7.96                 | 85             | 0.04    | 3.00           | 3.50           |
| SDR0603-2R5ML   | 2.5             | ± 20   | 21     | 7.96                 | 74             | 0.05    | 2.35           | 2.70           |
| SDR0603-3R3ML   | 3.3             | ± 20   | 21     | 7.96                 | 68             | 0.05    | 2.20           | 2.60           |
| SDR0603-3R9ML   | 3.9             | ± 20   | 22     | 7.96                 | 62             | 0.05    | 2.10           | 2.20           |
| SDR0603-4R7ML   | 4.7             | ± 20   | 20     | 7.96                 | 56             | 0.07    | 1.80           | 2.20           |
| SDR0603-5R0ML   | 5.0             | ± 20   | 19     | 7.96                 | 50             | 0.07    | 1.60           | 2.10           |
| SDR0603-6R8ML   | 6.8             | ± 20   | 19     | 7.96                 | 44             | 0.11    | 1.38           | 1.80           |
| SDR0603-7R5ML   | 7.5             | ± 20   | 19     | 7.96                 | 38             | 0.12    | 1.29           | 1.60           |
| SDR0603-100ML   | 10              | ± 20   | 24     | 2.52                 | 34             | 0.15    | 1.14           | 1.40           |
| SDR0603-120ML   | 12              | ± 20   | 23     | 2.52                 | 30             | 0.16    | 1.02           | 1.30           |
| SDR0603-150ML   | 15              | ± 20   | 22     | 2.52                 | 28             | 0.18    | 0.93           | 1.10           |
| SDR0603-180ML   | 18              | ± 20   | 23     | 2.52                 | 24             | 0.25    | 0.82           | 1.10           |
| SDR0603-220ML   | 22              | ± 20   | 20     | 2.52                 | 30             | 0.28    | 0.75           | 0.96           |
| SDR0603-270ML   | 27              | ± 20   | 19     | 2.52                 | 19             | 0.30    | 0.67           | 0.86           |
| SDR0603-330KL   | 33              | ± 10   | 23     | 2.52                 | 15             | 0.45    | 0.61           | 0.70           |
| SDR0603-390KL   | 39              | ± 10   | 22     | 2.52                 | 13             | 0.46    | 0.56           | 0.66           |
| SDR0603-470KL   | 47              | ± 10   | 20     | 2.52                 | 13             | 0.55    | 0.52           | 0.62           |
| SDR0603-560KL   | 56              | ± 10   | 17     | 2.52                 | 12             | 0.62    | 0.48           | 0.58           |
| SDR0603-680KL   | 68              | ± 10   | 17     | 2.52                 | 12             | 0.72    | 0.44           | 0.54           |
| SDR0603-820KL   | 82              | ± 10   | 15     | 2.52                 | 11             | 0.84    | 0.40           | 0.48           |
| SDR0603-101KL   | 100             | ± 10   | 28     | 0.796                | 10             | 0.95    | 0.38           | 0.66           |
| SDR0603-121KL   | 120             | ± 10   | 27     | 0.796                | 8              | 1.10    | 0.36           | 0.60           |
| SDR0603-151KL   | 150             | ± 10   | 28     | 0.796                | 8              | 1.43    | 0.32           | 0.56           |
| SDR0603-181KL   | 180             | ± 10   | 26     | 0.796                | 7              | 1.60    | 0.30           | 0.50           |
| SDR0603-221KL   | 220             | ± 10   | 26     | 0.796                | 6              | 2.00    | 0.26           | 0.46           |
| SDR0603-271KL   | 270             | ± 10   | 26     | 0.796                | 5              | 2.40    | 0.24           | 0.38           |
| SDR0603-331KL   | 330             | ± 10   | 28     | 0.796                | 5              | 3.20    | 0.20           | 0.36           |
| SDR0603-391KL   | 390             | ± 10   | 28     | 0.796                | 4              | 3.40    | 0.18           | 0.32           |
| SDR0603-471KL   | 470             | ± 10   | 29     | 0.796                | 4              | 4.55    | 0.15           | 0.26           |

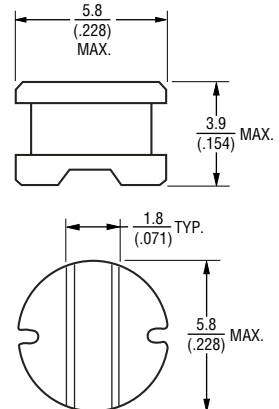
## General Specifications

Test Voltage .....1 V  
 Reflow Soldering ...230 °C, 50 sec. max.  
 Operating Temperature ..-40 °C to +125 °C  
 (Temperature rise included)  
 Storage Temperature...-40 °C to +125 °C  
 Resistance to Soldering Heat  
 .....260 °C for 5 sec.

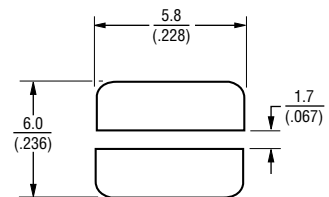
## Materials

Core .....Ferrite DR core  
 Wire .....Enameled copper  
 Terminal .....Ag/Ni/Sn  
 Rated Current..Ind. drop 10 % typ. at Isat  
 Temperature Rise .....40 °C max.  
 at rated I rms  
 Packaging.....400 pcs. per reel

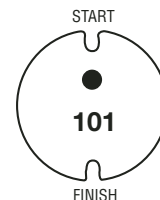
## Product Dimensions



## Recommended Layout



## Typical Part Marking



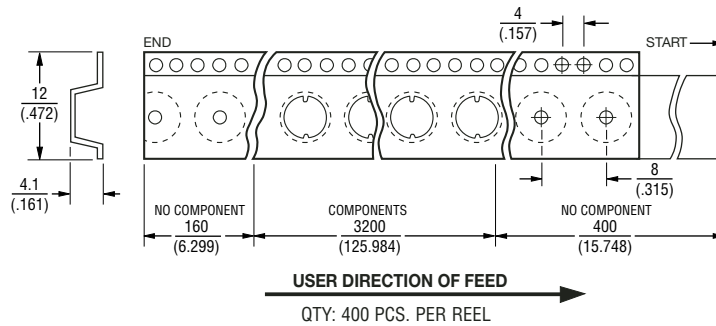
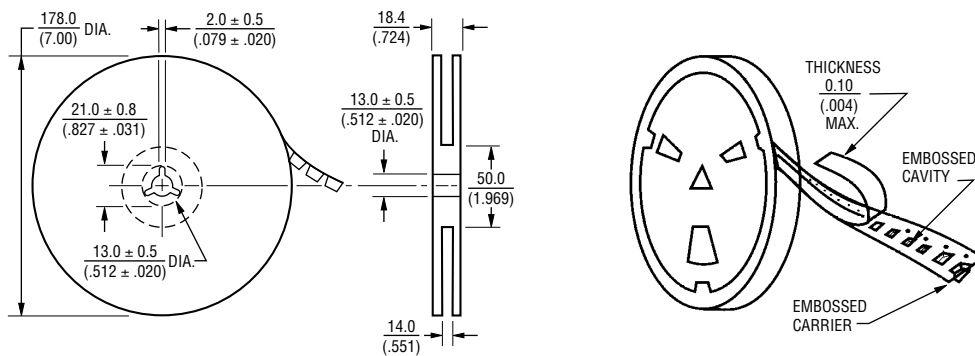
DIMENSIONS:  $\frac{\text{MM}}{\text{(INCHES)}}$

\*RoHS Directive 2002/95/EC Jan 27 2003 including Annex  
 Specifications are subject to change without notice.  
 Customers should verify actual device performance in their specific applications.

# SDR0603 Series - SMD Power Inductors

**BOURNS®**

## Packaging Specifications



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