



## Features

- Available in E12 series
- Small diameter of only 5.8 mm maximum
- Profile of 4.8 mm
- RoHS compliant\*

## Applications

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

# SDR0604 Series - SMD Power Inductors

## Electrical Specifications

| Bourns Part No. | Inductance 1kHz |          | Q Ref. | Test Frequency (MHz) | SRF Min. (MHz) | RDC Max. ( $\Omega$ ) | I rms Max. (A) | I sat Typ. (A) |
|-----------------|-----------------|----------|--------|----------------------|----------------|-----------------------|----------------|----------------|
|                 | ( $\mu$ H)      | Tol. %   |        |                      |                |                       |                |                |
| SDR0604-1R2ML   | 1.2             | $\pm 20$ | 35     | 7.96                 | 155            | 0.02                  | 4.2            | 7.30           |
| SDR0604-1R5ML   | 1.5             | $\pm 20$ | 32     | 7.96                 | 108            | 0.03                  | 3.60           | 6.10           |
| SDR0604-2R2ML   | 2.2             | $\pm 20$ | 33     | 7.96                 | 79             | 0.06                  | 2.80           | 5.10           |
| SDR0604-2R7ML   | 2.7             | $\pm 20$ | 22     | 7.96                 | 65             | 0.06                  | 2.30           | 3.80           |
| SDR0604-3R3ML   | 3.3             | $\pm 20$ | 22     | 7.96                 | 60             | 0.07                  | 2.00           | 3.50           |
| SDR0604-3R9ML   | 3.9             | $\pm 20$ | 22     | 7.96                 | 40             | 0.07                  | 1.90           | 3.20           |
| SDR0604-4R7ML   | 4.7             | $\pm 20$ | 20     | 7.96                 | 34             | 0.08                  | 1.80           | 3.00           |
| SDR0604-5R6ML   | 5.6             | $\pm 20$ | 20     | 7.96                 | 30             | 0.08                  | 1.70           | 2.70           |
| SDR0604-6R8ML   | 6.8             | $\pm 20$ | 20     | 7.96                 | 28             | 0.12                  | 1.60           | 2.50           |
| SDR0604-8R2ML   | 8.2             | $\pm 20$ | 20     | 7.96                 | 26             | 0.09                  | 1.50           | 2.30           |
| SDR0604-100ML   | 10              | $\pm 20$ | 30     | 2.52                 | 23             | 0.10                  | 1.45           | 2.00           |
| SDR0604-120ML   | 12              | $\pm 20$ | 30     | 2.52                 | 22             | 0.12                  | 1.40           | 1.90           |
| SDR0604-150YL   | 15              | $\pm 15$ | 30     | 2.52                 | 20             | 0.14                  | 1.30           | 1.60           |
| SDR0604-180YL   | 18              | $\pm 15$ | 30     | 2.52                 | 18             | 0.15                  | 1.25           | 1.50           |
| SDR0604-220YL   | 22              | $\pm 15$ | 30     | 2.52                 | 16             | 0.19                  | 1.10           | 1.40           |
| SDR0604-270YL   | 27              | $\pm 15$ | 28     | 2.52                 | 14             | 0.22                  | 1.00           | 1.30           |
| SDR0604-330KL   | 33              | $\pm 10$ | 24     | 2.52                 | 13             | 0.25                  | 0.88           | 1.10           |
| SDR0604-390KL   | 39              | $\pm 10$ | 24     | 2.52                 | 13             | 0.32                  | 0.80           | 1.00           |
| SDR0604-470KL   | 47              | $\pm 10$ | 22     | 2.52                 | 12             | 0.37                  | 0.72           | 1.00           |
| SDR0604-560KL   | 56              | $\pm 10$ | 22     | 2.52                 | 11             | 0.42                  | 0.68           | 0.90           |
| SDR0604-680KL   | 68              | $\pm 10$ | 22     | 2.52                 | 10             | 0.52                  | 0.62           | 0.84           |
| SDR0604-820KL   | 82              | $\pm 10$ | 20     | 2.52                 | 9              | 0.60                  | 0.58           | 0.75           |
| SDR0604-101KL   | 100             | $\pm 10$ | 20     | 0.796                | 9              | 0.70                  | 0.52           | 0.68           |
| SDR0604-121KL   | 120             | $\pm 10$ | 22     | 0.796                | 7              | 0.93                  | 0.48           | 0.60           |
| SDR0604-151KL   | 150             | $\pm 10$ | 20     | 0.796                | 6              | 1.10                  | 0.40           | 0.54           |
| SDR0604-181KL   | 180             | $\pm 10$ | 20     | 0.796                | 6              | 1.38                  | 0.38           | 0.50           |
| SDR0604-221KL   | 220             | $\pm 10$ | 20     | 0.796                | 6              | 1.57                  | 0.35           | 0.44           |
| SDR0604-271KL   | 270             | $\pm 10$ | 26     | 0.796                | 4              | 1.88                  | 0.32           | 0.40           |
| SDR0604-331KL   | 330             | $\pm 10$ | 25     | 0.796                | 3              | 2.25                  | 0.27           | 0.36           |
| SDR0604-391KL   | 390             | $\pm 10$ | 25     | 0.796                | 3              | 2.48                  | 0.25           | 0.34           |
| SDR0604-471KL   | 470             | $\pm 10$ | 25     | 0.796                | 3              | 3.30                  | 0.21           | 0.30           |
| SDR0604-561KL   | 560             | $\pm 10$ | 24     | 0.252                | 3              | 4.00                  | 0.18           | 0.26           |
| SDR0604-681KL   | 680             | $\pm 10$ | 26     | 0.252                | 2              | 4.65                  | 0.16           | 0.25           |
| SDR0604-821KL   | 820             | $\pm 10$ | 25     | 0.252                | 2              | 5.20                  | 0.14           | 0.20           |
| SDR0604-102KL   | 1000            | $\pm 10$ | 45     | 0.252                | 1.5            | 6.80                  | 0.12           | 0.12           |

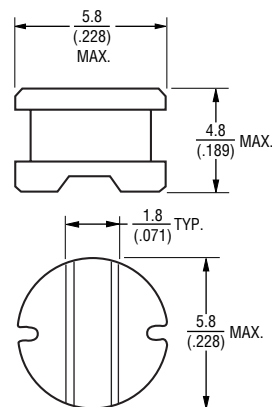
## General Specifications

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.

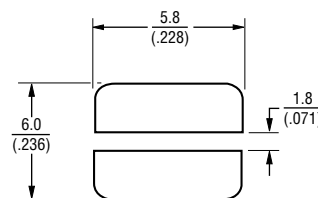
## Materials

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

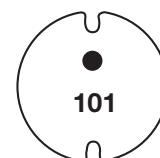
## Product Dimensions



## Recommended Layout



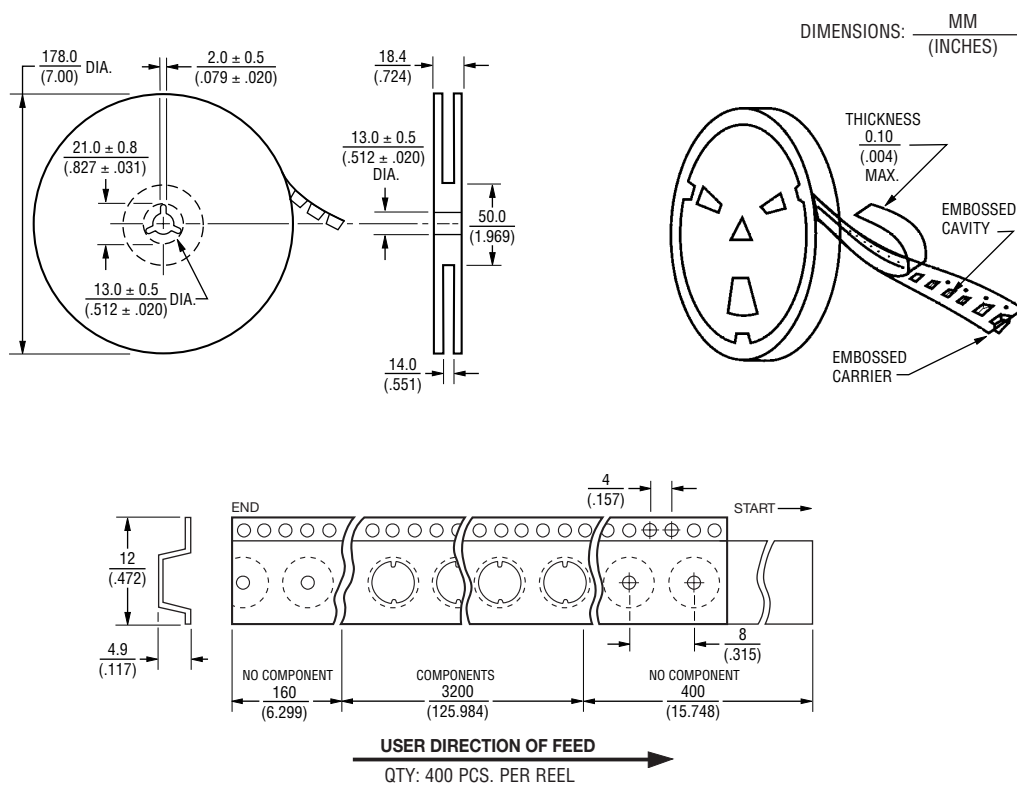
## Typical Part Marking



# SDR0604 Series - SMD Power Inductors

**BOURNS®**

## Packaging Specifications



REV. 05/12

Specifications are subject to change without notice.  
Customers should verify actual device performance in their specific applications.