



## Features

- Available in E12 series
- Low profile of only 2.5 mm
- Low inductance values
- RoHS compliant\*

## Applications

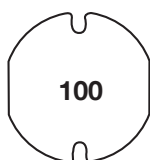
- Input/output of DC/DC converters
- Power supplies for:
  - Portable communication equipment
  - Camcorders
  - LCD TVs
  - Car radios

# SDR0302 Series - SMD Power Inductors

## Electrical Specifications

| Bourns Part No. | Inductance 1kHz |        | Q Ref. | Test Frequency (MHz) | SRF Min. (MHz) | RDC Max. (Ω) | I rms Max. (A) | I sat Typ. (A) |
|-----------------|-----------------|--------|--------|----------------------|----------------|--------------|----------------|----------------|
|                 | (μH)            | Tol. % |        |                      |                |              |                |                |
| SDR0302-1R0ML   | 1.0             | ± 20   | 20     | 7.96                 | 125.0          | 0.06         | 2.100          | 2.700          |
| SDR0302-1R2ML   | 1.2             | ± 20   | 22     | 7.96                 | 100.0          | 0.07         | 2.000          | 2.500          |
| SDR0302-1R4ML   | 1.4             | ± 20   | 22     | 7.96                 | 95.0           | 0.07         | 1.500          | 2.300          |
| SDR0302-1R5ML   | 1.5             | ± 20   | 23     | 7.96                 | 95.0           | 0.07         | 1.900          | 2.300          |
| SDR0302-1R8ML   | 1.8             | ± 20   | 23     | 7.96                 | 85.0           | 0.08         | 1.800          | 2.000          |
| SDR0302-2R2ML   | 2.2             | ± 20   | 22     | 7.96                 | 75.0           | 0.09         | 1.650          | 1.850          |
| SDR0302-2R7ML   | 2.7             | ± 20   | 22     | 7.96                 | 72.0           | 0.10         | 1.500          | 1.700          |
| SDR0302-3R3ML   | 3.3             | ± 20   | 23     | 7.96                 | 68.0           | 0.11         | 1.400          | 1.600          |
| SDR0302-3R9ML   | 3.9             | ± 20   | 24     | 7.96                 | 50.0           | 0.12         | 1.300          | 1.500          |
| SDR0302-4R7ML   | 4.7             | ± 20   | 18     | 7.96                 | 45.0           | 0.15         | 1.200          | 1.350          |
| SDR0302-5R6ML   | 5.6             | ± 20   | 18     | 7.96                 | 42.0           | 0.16         | 1.100          | 1.300          |
| SDR0302-6R8ML   | 6.8             | ± 20   | 18     | 7.96                 | 40.0           | 0.18         | 1.000          | 1.200          |
| SDR0302-8R2ML   | 8.2             | ± 20   | 16     | 7.96                 | 35.0           | 0.20         | 0.900          | 1.050          |
| SDR0302-100ML   | 10.0            | ± 20   | 18     | 2.52                 | 34.0           | 0.25         | 0.800          | 0.900          |
| SDR0302-120ML   | 12.0            | ± 20   | 15     | 2.52                 | 33.0           | 0.28         | 0.750          | 0.850          |
| SDR0302-150ML   | 15.0            | ± 20   | 20     | 2.52                 | 32.0           | 0.40         | 0.650          | 0.800          |
| SDR0302-180ML   | 18.0            | ± 20   | 18     | 2.52                 | 28.0           | 0.46         | 0.580          | 0.750          |
| SDR0302-220ML   | 22.0            | ± 20   | 23     | 2.52                 | 22.0           | 0.66         | 0.520          | 0.650          |
| SDR0302-270ML   | 27.0            | ± 20   | 23     | 2.52                 | 20.0           | 0.75         | 0.480          | 0.550          |
| SDR0302-330KL   | 33.0            | ± 10   | 20     | 2.52                 | 18.0           | 0.85         | 0.420          | 0.500          |
| SDR0302-390KL   | 39.0            | ± 10   | 24     | 2.52                 | 18.0           | 1.12         | 0.380          | 0.450          |
| SDR0302-470KL   | 47.0            | ± 10   | 23     | 2.52                 | 17.0           | 1.27         | 0.360          | 0.400          |
| SDR0302-560KL   | 56.0            | ± 10   | 18     | 2.52                 | 16.0           | 1.45         | 0.340          | 0.350          |
| SDR0302-680KL   | 68.0            | ± 10   | 24     | 2.52                 | 14.0           | 1.85         | 0.300          | 0.320          |
| SDR0302-820KL   | 82.0            | ± 10   | 24     | 2.52                 | 12.0           | 2.10         | 0.280          | 0.300          |
| SDR0302-101KL   | 100.0           | ± 10   | 40     | 0.796                | 10.0           | 2.85         | 0.260          | 0.280          |
| SDR0302-121KL   | 120.0           | ± 10   | 40     | 0.796                | 10.0           | 3.20         | 0.220          | 0.250          |
| SDR0302-151KL   | 150.0           | ± 10   | 38     | 0.796                | 9.0            | 4.60         | 0.200          | 0.230          |
| SDR0302-181KL   | 180.0           | ± 10   | 45     | 0.796                | 8.5            | 5.00         | 0.185          | 0.210          |
| SDR0302-221KL   | 220.0           | ± 10   | 40     | 0.796                | 8.0            | 5.70         | 0.170          | 0.190          |
| SDR0302-271KL   | 270.0           | ± 10   | 45     | 0.796                | 7.0            | 8.60         | 0.150          | 0.170          |
| SDR0302-331KL   | 330.0           | ± 10   | 40     | 0.796                | 6.0            | 10.00        | 0.130          | 0.150          |
| SDR0302-391KL   | 390.0           | ± 10   | 40     | 0.796                | 5.5            | 10.80        | 0.120          | 0.140          |
| SDR0302-471KL   | 470.0           | ± 10   | 42     | 0.796                | 5.0            | 14.30        | 0.105          | 0.130          |
| SDR0302-561KL   | 560.0           | ± 10   | 43     | 0.796                | 4.8            | 16.00        | 0.095          | 0.120          |
| SDR0302-681KL   | 680.0           | ± 10   | 43     | 0.796                | 4.3            | 18.00        | 0.085          | 0.110          |
| SDR0302-821KL   | 820.0           | ± 10   | 45     | 0.796                | 4.0            | 22.50        | 0.080          | 0.100          |
| SDR0302-102KL   | 1000.0          | ± 10   | 40     | 0.252                | 3.2            | 26.00        | 0.070          | 0.090          |
| SDR0302-122KL   | 1200.0          | ± 10   | 40     | 0.252                | 3.0            | 30.00        | 0.060          | 0.080          |

## Typical Part Marking



## Electrical Schematic



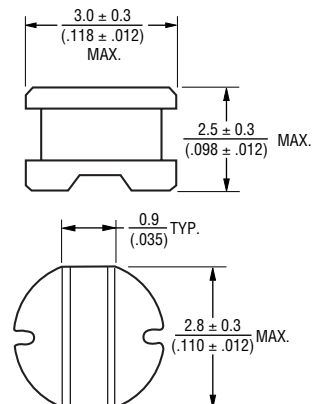
## General Specifications

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.

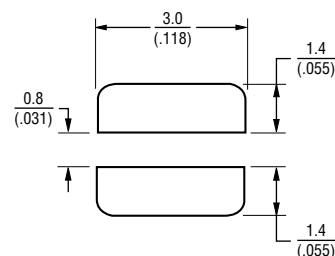
## Materials

Core .....Ferrite DR  
 Wire .....Enamelled copper wire 130  
 Terminal.....Ag/Ni/Sn  
 Rated Current  
 .....Ind. drop 10 % typ. at Isat  
 Temperature Rise .....40 °C max.  
 at rated Irms  
 Packaging .....2000 pcs. per reel

## Product Dimensions



## Recommended Layout



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

\*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.

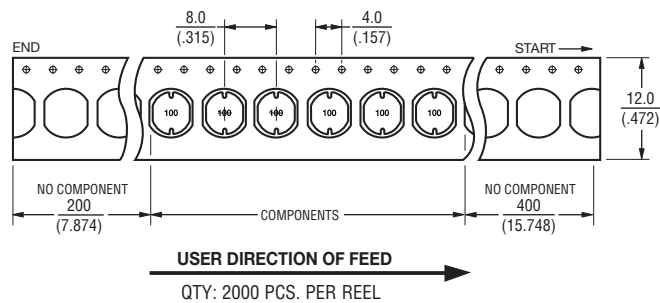
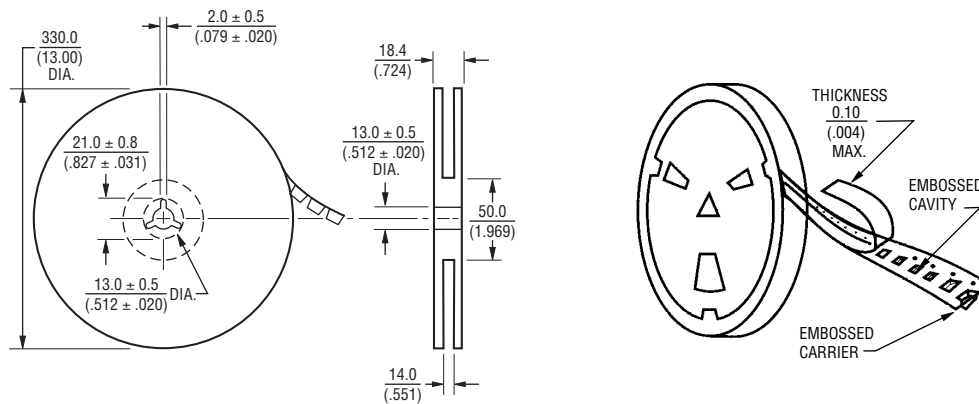
Specifications are subject to change without notice.

The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time. Users should verify actual device performance in their specific applications.

# SDR0302 Series - SMD Power Inductors

**BOURNS®**

## Packaging Specifications



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

REV. 08/14

Specifications are subject to change without notice.  
The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.  
Users should verify actual device performance in their specific applications.

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

## Bourns:

[SDR0302-681K](#) [SDR0302-470K](#) [SDR0302-270M](#) [SDR0302-3R9M](#) [SDR0302-150M](#) [SDR0302-271K](#) [SDR0302-220M](#) [SDR0302-120M](#) [SDR0302-4R7M](#) [SDR0302-151K](#) [SDR0302-121K](#) [SDR0302-560K](#) [SDR0302-2R2M](#) [SDR0302-1R2M](#) [SDR0302-101K](#) [SDR0302-471K](#) [SDR0302-180M](#) [SDR0302-561K](#) [SDR0302-5R6M](#) [SDR0302-6R8M](#) [SDR0302-331K](#) [SDR0302-100M](#) [SDR0302-1R5M](#) [SDR0302-330K](#) [SDR0302-181K](#) [SDR0302-390K](#) [SDR0302-2R7M](#) [SDR0302-680K](#) [SDR0302-8R2M](#) [SDR0302-391K](#) [SDR0302-122K](#) [SDR0302-221K](#) [SDR0302-820K](#) [SDR0302-3R3M](#) [SDR0302-821K](#) [SDR0302-102K](#) [SDR0302-1R8M](#)