



## Features

- Available in E6 series
- Low profile of only 6.6 mm
- Inductance as low as 1  $\mu$ H
- RoHS compliant\*

## Applications

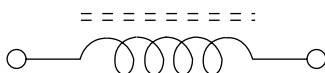
- Input/output of DC/DC converters
- Power supplies for:
  - Portable communications equipment
  - Camcorders
  - LCD TVs
  - Car radios

# SDR1806 Series - SMD Power Inductors

## Electrical Specifications

| Bourns Part No. | Inductance 100 kHz |          | Q Ref. | Test Frequency (MHz) | SRF Typ. (MHz) | RDC ( $m\Omega$ ) | I rms Max. (A) | I sat Typ. (A) |
|-----------------|--------------------|----------|--------|----------------------|----------------|-------------------|----------------|----------------|
|                 | ( $\mu$ H)         | Tol. %   |        |                      |                |                   |                |                |
| SDR1806-1R0ML   | 1                  | $\pm 20$ | 21     | 7.96                 | 100.0          | 4.0               | 10.0           | 30.00          |
| SDR1806-2R2ML   | 2.2                | $\pm 20$ | 22     | 7.96                 | 55.0           | 6.8               | 9.00           | 22.00          |
| SDR1806-3R3ML   | 3.3                | $\pm 20$ | 22     | 7.96                 | 40.0           | 9.8               | 7.60           | 17.00          |
| SDR1806-5R6ML   | 5.6                | $\pm 20$ | 23     | 7.96                 | 30.0           | 15.0              | 6.40           | 12.80          |
| SDR1806-100ML   | 10.0               | $\pm 20$ | 22     | 2.52                 | 25.0           | 25.0              | 5.30           | 10.00          |
| SDR1806-150ML   | 15.0               | $\pm 20$ | 20     | 2.52                 | 17.0           | 35.0              | 4.30           | 8.00           |
| SDR1806-220ML   | 22.0               | $\pm 20$ | 22     | 2.52                 | 13.0           | 45.0              | 3.60           | 6.70           |
| SDR1806-330ML   | 33.0               | $\pm 20$ | 24     | 2.52                 | 11.0           | 68.0              | 3.00           | 5.40           |
| SDR1806-470ML   | 47.0               | $\pm 20$ | 22     | 2.52                 | 9.0            | 95.0              | 2.50           | 4.60           |
| SDR1806-680ML   | 68.0               | $\pm 20$ | 22     | 2.52                 | 8.0            | 130.0             | 2.10           | 3.80           |
| SDR1806-101KL   | 100.0              | $\pm 10$ | 25     | 0.796                | 7.0            | 190.0             | 1.70           | 3.20           |
| SDR1806-151KL   | 150.0              | $\pm 10$ | 23     | 0.796                | 5.0            | 270.0             | 1.40           | 2.60           |
| SDR1806-221KL   | 220.0              | $\pm 10$ | 20     | 0.796                | 4.5            | 420.0             | 1.10           | 2.20           |
| SDR1806-331KL   | 330.0              | $\pm 10$ | 18     | 0.796                | 3.5            | 580.0             | 1.00           | 1.80           |
| SDR1806-471KL   | 470.0              | $\pm 10$ | 15     | 0.796                | 3.0            | 820.0             | 0.80           | 1.50           |
| SDR1806-681KL   | 680.0              | $\pm 10$ | 12     | 0.796                | 2.5            | 1200.0            | 0.70           | 1.20           |
| SDR1806-102KL   | 1000.0             | $\pm 10$ | 10     | 0.252                | 2.0            | 1800.0            | 0.50           | 1.00           |

## Electrical Schematic



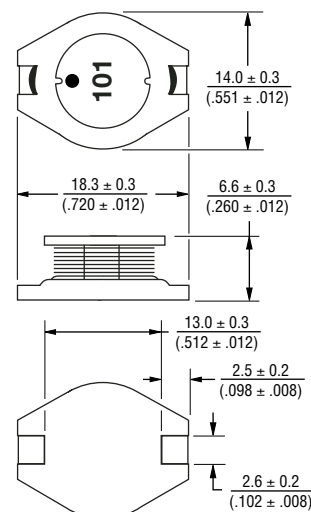
## General Specifications

Test Voltage.....0.1 V  
 Reflow soldering.....250 °C; 10 sec max.  
 (In compliance with JEDEC, J-STD-020C, Table 4-2)  
 Operating Temperature...-40 °C to +125 °C  
 (Temperature rise included)  
 Storage Temperature...-40 °C to +125 °C  
 Resistance to Soldering Heat  
 .....250 °C, 10 sec. max.

## Materials

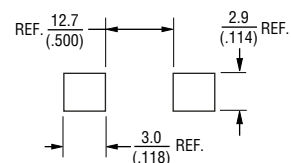
Core.....Ferrite DR  
 Wire.....Enameled copper  
 Base.....LCP E4008  
 Terminal.....Cu/Ni/Sn  
 Rated Current  
 .....Ind. drop 10 % typ. at Isat  
 Temperature Rise .....40 °C max.  
 at rated Irms  
 Packaging.....250 pcs. per reel

## Product Dimensions



● = START OF WINDING

## Recommended Layout

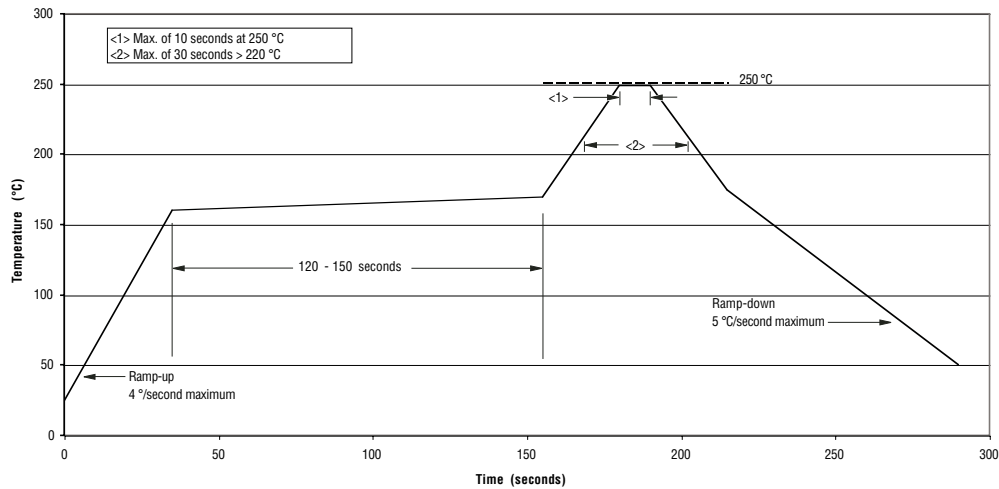


DIMENSIONS:  $\frac{\text{MM}}{(\text{INCHES})}$

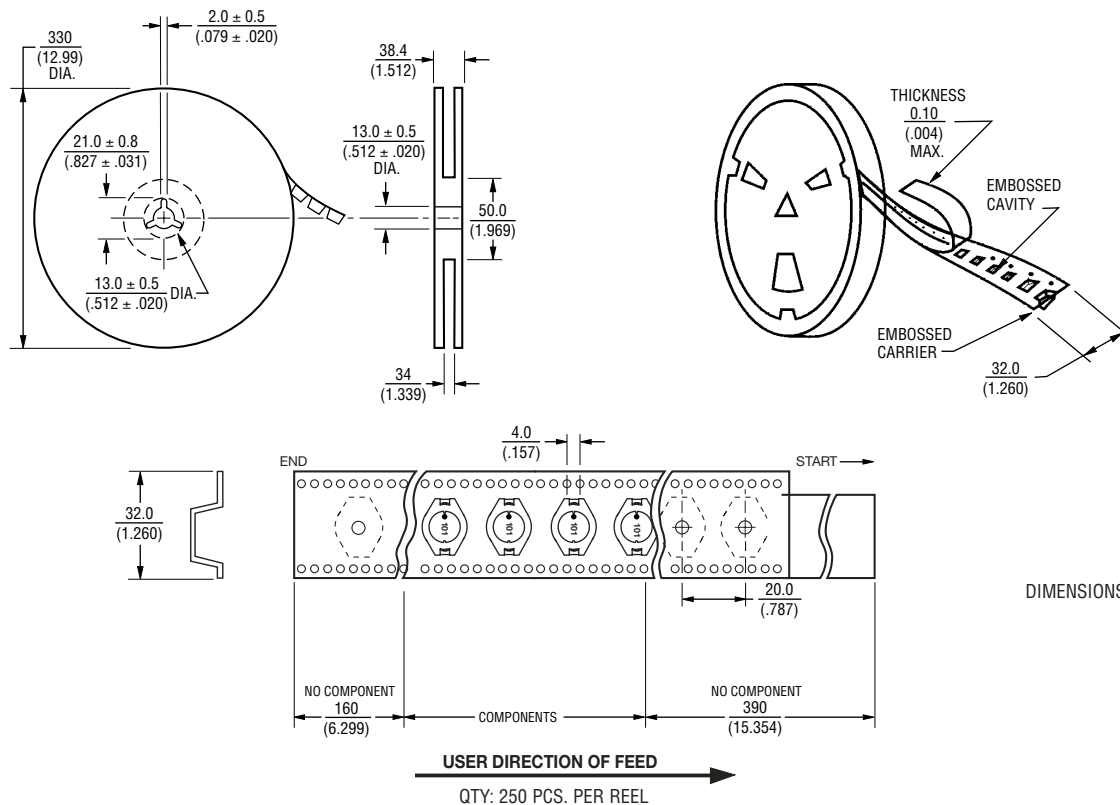
# SDR1806 Series - SMD Power Inductor

**BOURNS®**

## Soldering Profile



## Packaging Specifications



REV. 02/06

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