



## Features

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

## Applications

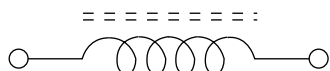
- Input/output of DC/DC converters
- Power supplies for:
  - Portable communications equipment
  - Camcorders
  - LCD TVs

# SDR1806 Series - SMD Power Inductors

## Electrical Specifications

| Bourns<br>Part Number | Inductance<br>100 kHz |          | Q<br>Ref. | Test<br>Frequency<br>(MHz) | SRF<br>Typ.<br>(MHz) | RDC<br>Max.<br>(m $\Omega$ ) | I rms<br>Max.<br>(A) | I sat<br>Typ.<br>(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                |
| SDR1806-8R2ML         | 8.2                   | $\pm 20$ | 22        | 7.96                       | 27.0                 | 20.0                         | 7.00                 | 9.40                 |
| 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



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**WARNING Cancer and Reproductive Harm - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)**

\*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. Users should verify actual device performance in their specific applications. The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at [www.bourns.com/docs/legal/disclaimer.pdf](http://www.bourns.com/docs/legal/disclaimer.pdf)

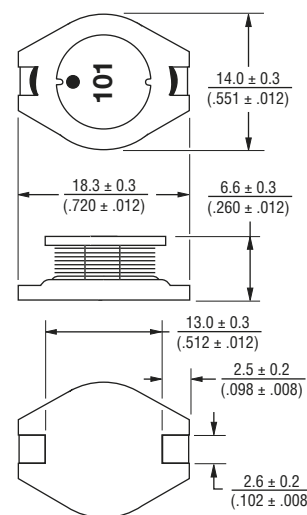
## General Specifications

Test Voltage ..... 0.1 V  
 Reflow Soldering ... 230 °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  
 ..... 260 °C, 10 sec. max.  
 Moisture Sensitivity Level..... 1  
 ESD Classification (HBM)..... N/A

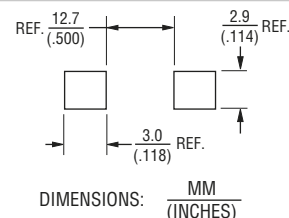
## Materials

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

## Product Dimensions



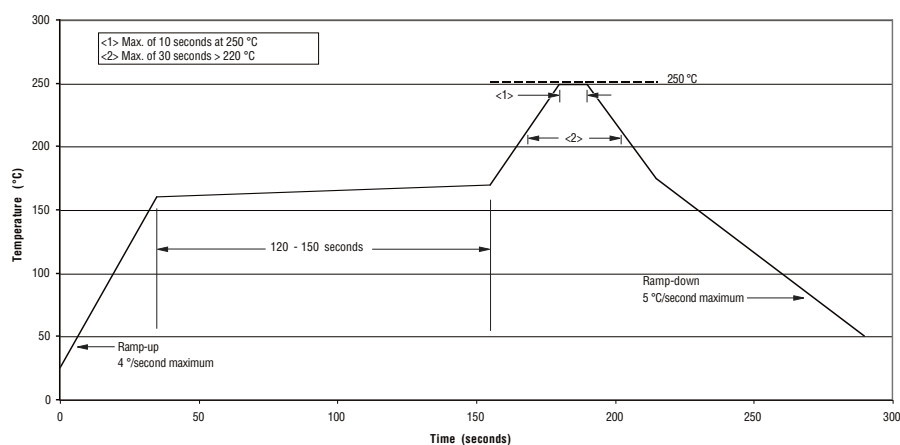
## Recommended Layout



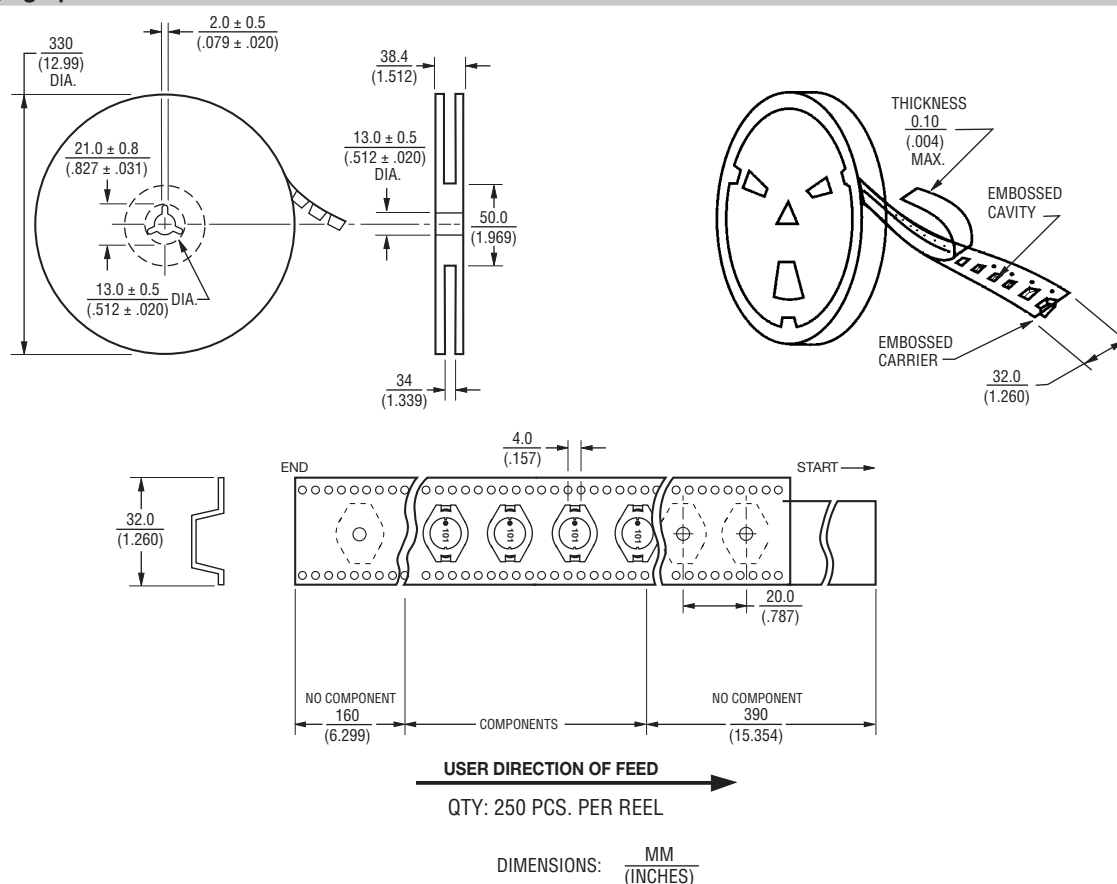
# SDR1806 Series - SMD Power Inductors

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## Soldering Profile



## 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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