



**THE DATASHEET OF  
SDR1006-561KL**





## Features

- Available in E12 series
- Small design of only 9.8 mm maximum diameter
- RoHS compliant\*

## Applications

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

# SDR1006 Series - SMD Power Inductors

### Electrical Specifications

| Bourns Part Number | Inductance 1 kHz |        | Q Ref. | Test Frequency (MHz) | SRF Min. (MHz) | RDC Max. (Ω) | I rms Max. (A) | I sat Typ. (A) |
|--------------------|------------------|--------|--------|----------------------|----------------|--------------|----------------|----------------|
|                    | (μH)             | Tol. % |        |                      |                |              |                |                |
| SDR1006-1R5ML      | 1.5              | ± 20   | 35     | 7.96                 | 105            | 0.018        | 6.40           | 10.00          |
| SDR1006-2R2ML      | 2.2              | ± 20   | 35     | 7.96                 | 68             | 0.021        | 5.40           | 10.00          |
| SDR1006-3R3ML      | 3.3              | ± 20   | 34     | 7.96                 | 55             | 0.024        | 5.00           | 10.00          |
| SDR1006-3R9ML      | 3.9              | ± 20   | 34     | 7.96                 | 48             | 0.027        | 4.60           | 8.40           |
| SDR1006-4R7ML      | 4.7              | ± 20   | 33     | 7.96                 | 40             | 0.036        | 4.00           | 7.30           |
| SDR1006-5R6ML      | 5.6              | ± 20   | 33     | 7.96                 | 35             | 0.040        | 3.80           | 6.40           |
| SDR1006-6R8ML      | 6.8              | ± 20   | 33     | 7.96                 | 32             | 0.044        | 3.40           | 5.90           |
| SDR1006-8R2ML      | 8.2              | ± 20   | 31     | 7.96                 | 24             | 0.048        | 3.00           | 5.40           |
| SDR1006-100ML      | 10               | ± 20   | 30     | 2.52                 | 21             | 0.060        | 2.60           | 5.10           |
| SDR1006-120ML      | 12               | ± 20   | 30     | 2.52                 | 20             | 0.070        | 2.45           | 4.50           |
| SDR1006-150ML      | 15               | ± 20   | 30     | 2.52                 | 16             | 0.080        | 2.25           | 4.00           |
| SDR1006-180ML      | 18               | ± 20   | 30     | 2.52                 | 15             | 0.090        | 2.15           | 3.80           |
| SDR1006-220ML      | 22               | ± 20   | 25     | 2.52                 | 13             | 0.10         | 1.95           | 3.50           |
| SDR1006-270KL      | 27               | ± 10   | 25     | 2.52                 | 11             | 0.11         | 1.75           | 3.40           |
| SDR1006-330KL      | 33               | ± 10   | 25     | 2.52                 | 10             | 0.12         | 1.50           | 2.90           |
| SDR1006-390KL      | 39               | ± 10   | 20     | 2.52                 | 9.0            | 0.14         | 1.35           | 2.60           |
| SDR1006-470KL      | 47               | ± 10   | 20     | 2.52                 | 8.0            | 0.17         | 1.25           | 2.30           |
| SDR1006-560KL      | 56               | ± 10   | 20     | 2.52                 | 7.5            | 0.19         | 1.15           | 2.10           |
| SDR1006-680KL      | 68               | ± 10   | 15     | 2.52                 | 7.0            | 0.22         | 1.10           | 2.00           |
| SDR1006-820KL      | 82               | ± 10   | 15     | 2.52                 | 6.0            | 0.25         | 1.00           | 1.90           |
| SDR1006-101KL      | 100              | ± 10   | 15     | 0.796                | 5.2            | 0.35         | 0.97           | 1.70           |
| SDR1006-121KL      | 120              | ± 10   | 15     | 0.796                | 5.0            | 0.40         | 0.89           | 1.50           |
| SDR1006-151KL      | 150              | ± 10   | 15     | 0.796                | 4.5            | 0.47         | 0.78           | 1.40           |
| SDR1006-181KL      | 180              | ± 10   | 12     | 0.796                | 4.0            | 0.63         | 0.72           | 1.30           |
| SDR1006-221KL      | 220              | ± 10   | 12     | 0.796                | 3.8            | 0.73         | 0.66           | 1.10           |
| SDR1006-271KL      | 270              | ± 10   | 12     | 0.796                | 3.5            | 0.97         | 0.57           | 1.00           |
| SDR1006-331KL      | 330              | ± 10   | 12     | 0.796                | 3.2            | 1.15         | 0.52           | 0.85           |
| SDR1006-391KL      | 390              | ± 10   | 12     | 0.796                | 3.0            | 1.30         | 0.48           | 0.80           |
| SDR1006-471KL      | 470              | ± 10   | 12     | 0.796                | 2.5            | 1.48         | 0.42           | 0.80           |
| SDR1006-561KL      | 560              | ± 10   | 12     | 0.796                | 2.3            | 1.90         | 0.33           | 0.66           |
| SDR1006-681KL      | 680              | ± 10   | 12     | 0.796                | 2.1            | 2.25         | 0.28           | 0.65           |
| SDR1006-821KL      | 820              | ± 10   | 10     | 0.796                | 2.0            | 2.55         | 0.24           | 0.56           |
| SDR1006-102KL      | 1000             | ± 10   | 30     | 0.252                | 1.9            | 3.10         | 0.23           | 0.53           |
| SDR1006-122KL      | 1200             | ± 10   | 31     | 0.252                | 1.8            | 4.20         | 0.21           | 0.48           |
| SDR1006-152KL      | 1500             | ± 10   | 31     | 0.252                | 1.7            | 5.00         | 0.19           | 0.45           |
| SDR1006-182KL      | 1800             | ± 10   | 31     | 0.252                | 1.6            | 6.80         | 0.17           | 0.38           |
| SDR1006-222KL      | 2200             | ± 10   | 31     | 0.252                | 1.5            | 7.60         | 0.16           | 0.36           |
| SDR1006-222KL      | 2200             | ± 10   | 31     | 0.252                | 1.5            | 7.60         | 0.16           | 0.36           |
| SDR1006-272KL      | 2700             | ± 10   | 32     | 0.252                | 1.4            | 11.60        | 0.14           | 0.33           |
| SDR1006-332KL      | 3300             | ± 10   | 32     | 0.252                | 1.3            | 13.50        | 0.12           | 0.30           |
| SDR1006-392KL      | 3900             | ± 10   | 32     | 0.252                | 1.2            | 14.80        | 0.11           | 0.28           |
| SDR1006-472KL      | 4700             | ± 10   | 32     | 0.252                | 0.8            | 18.00        | 0.10           | 0.24           |

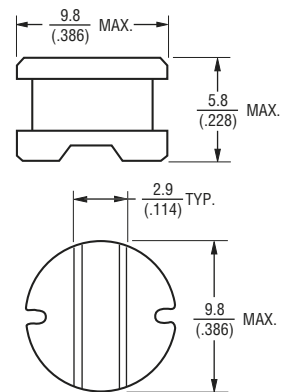
### General Specifications

Test Frequency ..... 1 KHz  
 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.  
 Moisture Sensitivity Level ..... 1  
 ESD Classification (HBM)..... N/A

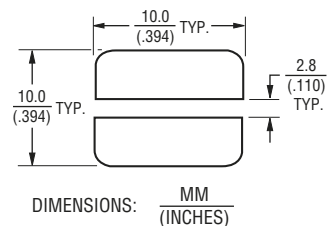
### Materials

Core ..... Ferrite DR core  
 Wire ..... Enameled copper wire  
 Base ..... DAP  
 Terminal ..... Ag/Ni/Sn  
 Rated Current ..... Ind. drop 10 % typ. at Isat  
 Temperature Rise ..... 40 °C max. at rated Irms  
 Packaging ..... 800 pcs. per reel

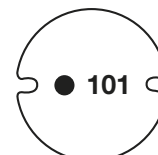
### Product Dimensions



### Recommended Layout



### Typical Part Marking



**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)

# SDR1006 Series - SMD Power Inductors

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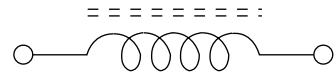
## Packaging Specifications



## Materials

Paper  
Plastics

## Electrical Schematic



## Strength Of Cover Tape



The force for tearing off cover tape is 10 to 130 grams in the arrow direction.

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REV. 04/18

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