



**THE DATASHEET OF  
SDR1005-332KL**





### Features

- Available in E6 series
- Low profile of only 5.0 mm
- Inductance as low as 0.68  $\mu$ H
- RoHS compliant\*

### Applications

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

## SDR1005 Series - SMD Power Inductors

### Electrical Specifications

| Bourns Part Number | Inductance<br>1 kHz |          | Q<br>Ref. | Test<br>Frequency<br>Q (MHz) | SRF<br>Min.<br>(MHz) | RDC<br>Max.<br>( $\Omega$ ) | I rms<br>Max.<br>(A) | I sat<br>Typ.<br>(A) |
|--------------------|---------------------|----------|-----------|------------------------------|----------------------|-----------------------------|----------------------|----------------------|
|                    | ( $\mu$ H)          | Tol. %   |           |                              |                      |                             |                      |                      |
| SDR1005-R68ML      | 0.68                | $\pm 20$ | 26        | 7.960                        | 160                  | 0.006                       | 8.50                 | 9.50                 |
| SDR1005-1R0ML      | 1                   | $\pm 20$ | 55        | 2.600                        | 137                  | 0.007                       | 7.50                 | 9.00                 |
| SDR1005-1R5ML      | 1.5                 | $\pm 20$ | 50        | 3.000                        | 95                   | 0.009                       | 6.50                 | 8.00                 |
| SDR1005-2R2ML      | 2.2                 | $\pm 20$ | 51        | 2.470                        | 65                   | 0.012                       | 6.10                 | 7.00                 |
| SDR1005-2R5ML      | 2.5                 | $\pm 20$ | 49        | 3.000                        | 56                   | 0.012                       | 5.50                 | 7.00                 |
| SDR1005-3R3ML      | 3.3                 | $\pm 20$ | 45        | 2.520                        | 54                   | 0.015                       | 5.00                 | 6.40                 |
| SDR1005-4R7ML      | 4.7                 | $\pm 20$ | 46        | 2.700                        | 42                   | 0.019                       | 4.50                 | 5.40                 |
| SDR1005-6R8ML      | 6.8                 | $\pm 20$ | 56        | 2.000                        | 31                   | 0.030                       | 3.40                 | 4.50                 |
| SDR1005-100ML      | 10                  | $\pm 20$ | 43        | 4.000                        | 26                   | 0.050                       | 2.90                 | 3.70                 |
| SDR1005-150ML      | 15                  | $\pm 20$ | 42        | 2.700                        | 22                   | 0.060                       | 2.50                 | 3.00                 |
| SDR1005-220ML      | 22                  | $\pm 20$ | 29        | 2.520                        | 18                   | 0.10                        | 2.00                 | 2.50                 |
| SDR1005-330KL      | 33                  | $\pm 10$ | 29        | 2.200                        | 14                   | 0.12                        | 1.80                 | 2.00                 |
| SDR1005-470KL      | 47                  | $\pm 10$ | 30        | 2.200                        | 12                   | 0.19                        | 1.40                 | 1.60                 |
| SDR1005-680KL      | 68                  | $\pm 10$ | 24        | 2.200                        | 11                   | 0.24                        | 1.20                 | 1.40                 |
| SDR1005-101KL      | 100                 | $\pm 10$ | 41        | 0.056                        | 8                    | 0.33                        | 1.00                 | 1.20                 |
| SDR1005-151KL      | 150                 | $\pm 10$ | 58        | 0.087                        | 6                    | 0.59                        | 0.80                 | 1.00                 |
| SDR1005-221KL      | 220                 | $\pm 10$ | 50        | 0.068                        | 5                    | 0.78                        | 0.70                 | 0.80                 |
| SDR1005-331KL      | 330                 | $\pm 10$ | 56        | 0.070                        | 4                    | 1.15                        | 0.55                 | 0.60                 |
| SDR1005-471KL      | 470                 | $\pm 10$ | 60        | 0.081                        | 4                    | 1.70                        | 0.45                 | 0.50                 |
| SDR1005-681KL      | 680                 | $\pm 10$ | 72        | 0.096                        | 3                    | 2.60                        | 0.35                 | 0.40                 |
| SDR1005-102KL      | 1000                | $\pm 10$ | 78        | 0.122                        | 2                    | 3.90                        | 0.30                 | 0.35                 |
| SDR1005-152KL      | 1500                | $\pm 10$ | 97        | 0.131                        | 2                    | 6.30                        | 0.25                 | 0.30                 |
| SDR1005-222KL      | 2200                | $\pm 10$ | 85        | 0.128                        | 2                    | 8.20                        | 0.20                 | 0.24                 |
| SDR1005-332KL      | 3300                | $\pm 10$ | 106       | 0.128                        | 1                    | 14.00                       | 0.16                 | 0.18                 |
| SDR1005-472KL      | 4700                | $\pm 10$ | 96        | 0.125                        | 1                    | 17.00                       | 0.15                 | 0.16                 |
| SDR1005-682KL      | 6800                | $\pm 10$ | 105       | 0.171                        | 1                    | 30.00                       | 0.11                 | 0.12                 |
| SDR1005-822KL      | 8200                | $\pm 10$ | 102       | 0.145                        | 1                    | 34.00                       | 0.11                 | 0.12                 |
| SDR1005-103KL      | 10000               | $\pm 10$ | 102       | 0.138                        | 1                    | 39.00                       | 0.10                 | 0.11                 |

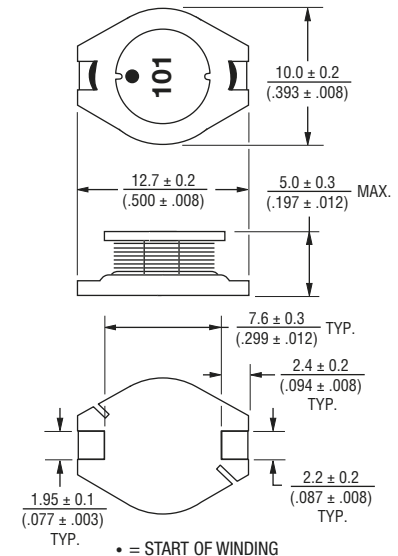
### General Specifications

Test Voltage ..... 0.1 V, 100 KHz  
 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.  
 Moisture Sensitivity Level..... 1  
 ESD Classification (HBM)..... N/A

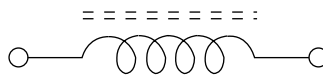
### Materials

Core ..... Ferrite DR  
 Wire ..... Enameled copper  
 Base ..... DAP  
 Terminal ..... Cu/Sn  
 Rated Current  
 ..... Ind. drop 10 % typ. at Isat  
 Temperature Rise  
 ..... 15 °C max. at rated I rms  
 Packaging ..... 600 pcs. per reel

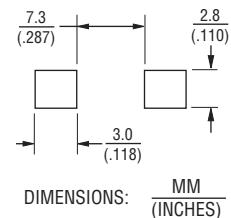
### Product Dimensions



### Electrical Schematic



### Recommended Layout



**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.  
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# SDR1005 Series - SMD Power Inductors

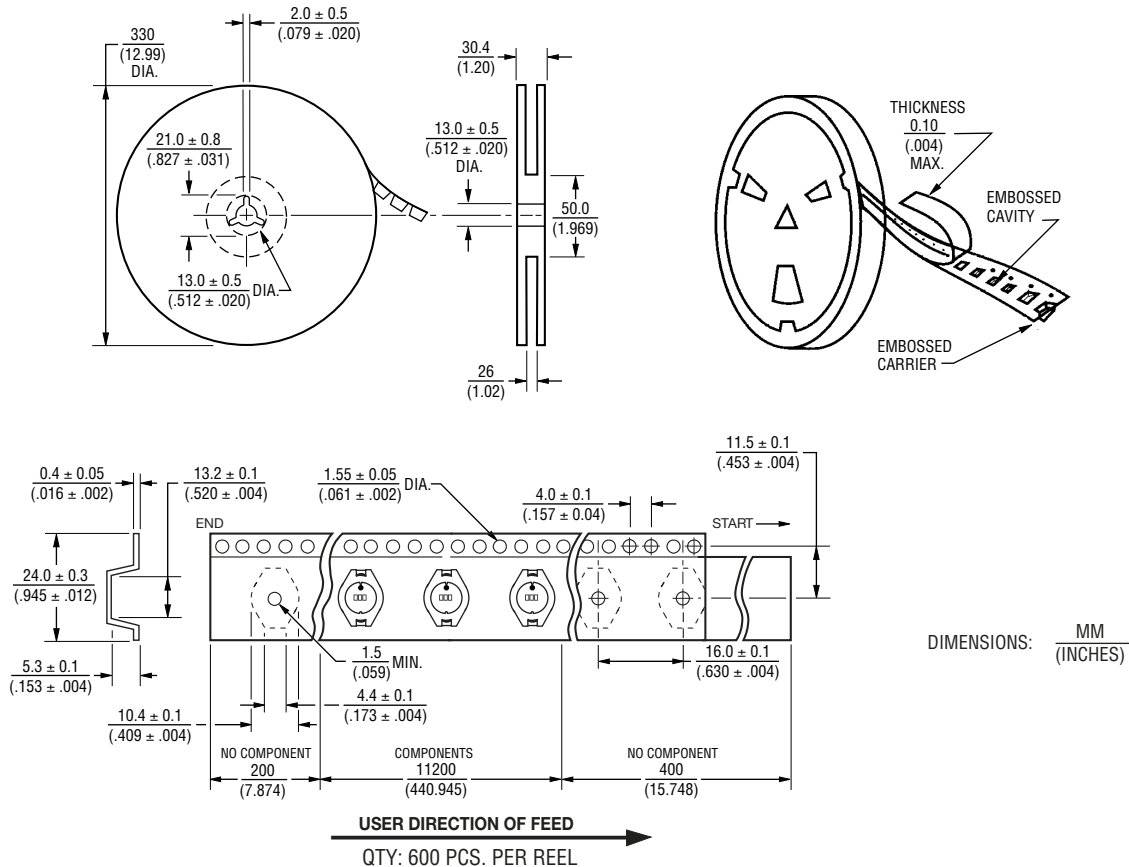
**BOURNS®**

## Soldering Profile



Peak Temperature: 245 °C max.  
 Max. Peak Temperature: -5 °C, 30 sec. max.  
 Max. Time Above 217 °C: 60 ~ 150 sec. max.

## 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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