



**THE DATASHEET OF  
SDR1307-333KL**





## Features

- Available in E12 series
- Small design of only 13 mm maximum diameter
- RoHS compliant\*

## Applications

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

# SDR1307 Series - SMD Power Inductors

## Electrical Specifications

| Bourns Part Number | Inductance 100 kHz |        | Q Ref. | Test Frequency (MHz) | SRF Min. (MHz) | RDC Max. (mΩ) | I rms Max. (A) | I sat Typ. (A) |
|--------------------|--------------------|--------|--------|----------------------|----------------|---------------|----------------|----------------|
|                    | (μH)               | Tol. % |        |                      |                |               |                |                |
| SDR1307-1R5ML      | 1.5                | ± 20   | 20     | 7.96                 | 65.0           | 5.0           | 9.50           | 20.00          |
| SDR1307-2R2ML      | 2.2                | ± 20   | 22     | 7.96                 | 50.0           | 6.0           | 9.00           | 18.00          |
| SDR1307-2R7ML      | 2.7                | ± 20   | 24     | 7.96                 | 40.0           | 8.0           | 8.20           | 16.00          |
| SDR1307-3R3ML      | 3.3                | ± 20   | 26     | 7.96                 | 38.0           | 8.7           | 7.50           | 15.00          |
| SDR1307-4R7ML      | 4.7                | ± 20   | 25     | 7.96                 | 36.0           | 10.0          | 7.00           | 13.00          |
| SDR1307-5R6ML      | 5.6                | ± 20   | 24     | 7.96                 | 28.0           | 15.0          | 6.50           | 11.00          |
| SDR1307-6R8ML      | 6.8                | ± 20   | 24     | 7.96                 | 26.0           | 17.0          | 6.00           | 10.50          |
| SDR1307-8R2ML      | 8.2                | ± 20   | 24     | 7.96                 | 24.0           | 19.0          | 5.80           | 9.80           |
| SDR1307-100ML      | 10                 | ± 20   | 22     | 2.52                 | 22.0           | 21.0          | 5.60           | 9.20           |
| SDR1307-120ML      | 12                 | ± 20   | 25     | 2.52                 | 20.0           | 30.0          | 4.80           | 8.00           |
| SDR1307-150ML      | 15                 | ± 20   | 28     | 2.52                 | 17.0           | 34.0          | 4.50           | 7.50           |
| SDR1307-180ML      | 18                 | ± 20   | 28     | 2.52                 | 16.0           | 36.0          | 4.20           | 7.00           |
| SDR1307-220ML      | 22                 | ± 20   | 40     | 2.52                 | 15.0           | 47.0          | 3.60           | 6.50           |
| SDR1307-270ML      | 27                 | ± 20   | 35     | 2.52                 | 11.0           | 60.0          | 3.30           | 5.50           |
| SDR1307-330KL      | 33                 | ± 10   | 35     | 2.52                 | 10.0           | 65.0          | 3.10           | 5.00           |
| SDR1307-390KL      | 39                 | ± 10   | 28     | 2.52                 | 9.0            | 75.0          | 2.90           | 4.60           |
| SDR1307-470KL      | 47                 | ± 10   | 24     | 2.52                 | 7.5            | 82.0          | 2.70           | 4.20           |
| SDR1307-560KL      | 56                 | ± 10   | 22     | 2.52                 | 7.2            | 95.0          | 2.50           | 3.80           |
| SDR1307-680KL      | 68                 | ± 10   | 24     | 2.52                 | 7.0            | 120.0         | 2.30           | 3.50           |
| SDR1307-820KL      | 82                 | ± 10   | 18     | 2.52                 | 6.0            | 140.0         | 2.10           | 3.20           |
| SDR1307-101KL      | 100                | ± 10   | 25     | 0.796                | 5.8            | 180.0         | 1.90           | 3.00           |
| SDR1307-121KL      | 120                | ± 10   | 20     | 0.796                | 5.5            | 210.0         | 1.80           | 2.80           |
| SDR1307-151KL      | 150                | ± 10   | 20     | 0.796                | 4.5            | 250.0         | 1.60           | 2.60           |
| SDR1307-181KL      | 180                | ± 10   | 18     | 0.796                | 4.0            | 280.0         | 1.50           | 2.30           |
| SDR1307-221KL      | 220                | ± 10   | 15     | 0.796                | 3.8            | 360.0         | 1.30           | 2.10           |
| SDR1307-271KL      | 270                | ± 10   | 15     | 0.796                | 3.5            | 410.0         | 1.20           | 1.80           |
| SDR1307-331KL      | 330                | ± 10   | 15     | 0.796                | 3.2            | 520.0         | 1.10           | 1.60           |
| SDR1307-391KL      | 390                | ± 10   | 12     | 0.796                | 2.5            | 600.0         | 1.00           | 1.50           |
| SDR1307-471KL      | 470                | ± 10   | 12     | 0.796                | 2.2            | 720.0         | 0.90           | 1.40           |
| SDR1307-561KL      | 560                | ± 10   | 10     | 0.796                | 2.0            | 880.0         | 0.85           | 1.30           |
| SDR1307-681KL      | 680                | ± 10   | 10     | 0.796                | 1.6            | 1000.0        | 0.80           | 1.20           |
| SDR1307-821KL      | 820                | ± 10   | 10     | 0.796                | 1.5            | 1300.0        | 0.75           | 1.10           |
| SDR1307-102KL      | 1000               | ± 10   | 10     | 0.252                | 1.4            | 1600.0        | 0.65           | 1.00           |

## General Specifications

Test Voltage ..... 0.1 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 10 sec.  
 Moisture Sensitivity Level..... 1  
 ESD Classification (HBM)..... N/A

## Materials

Core ..... Ferrite DR  
 Wire ..... Enamelled copper wire  
 Terminal..... Ag/Ni/Sn  
 Rated Current ..... Ind. drop 10 % typ. at Isat  
 Temperature Rise ..... 40 °C max. at rated Irms  
 Packaging..... 400 pcs. per reel

## Product Dimensions



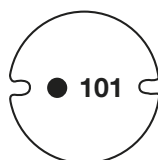
## Recommended Layout



## Electrical Schematic



## Typical Part Marking



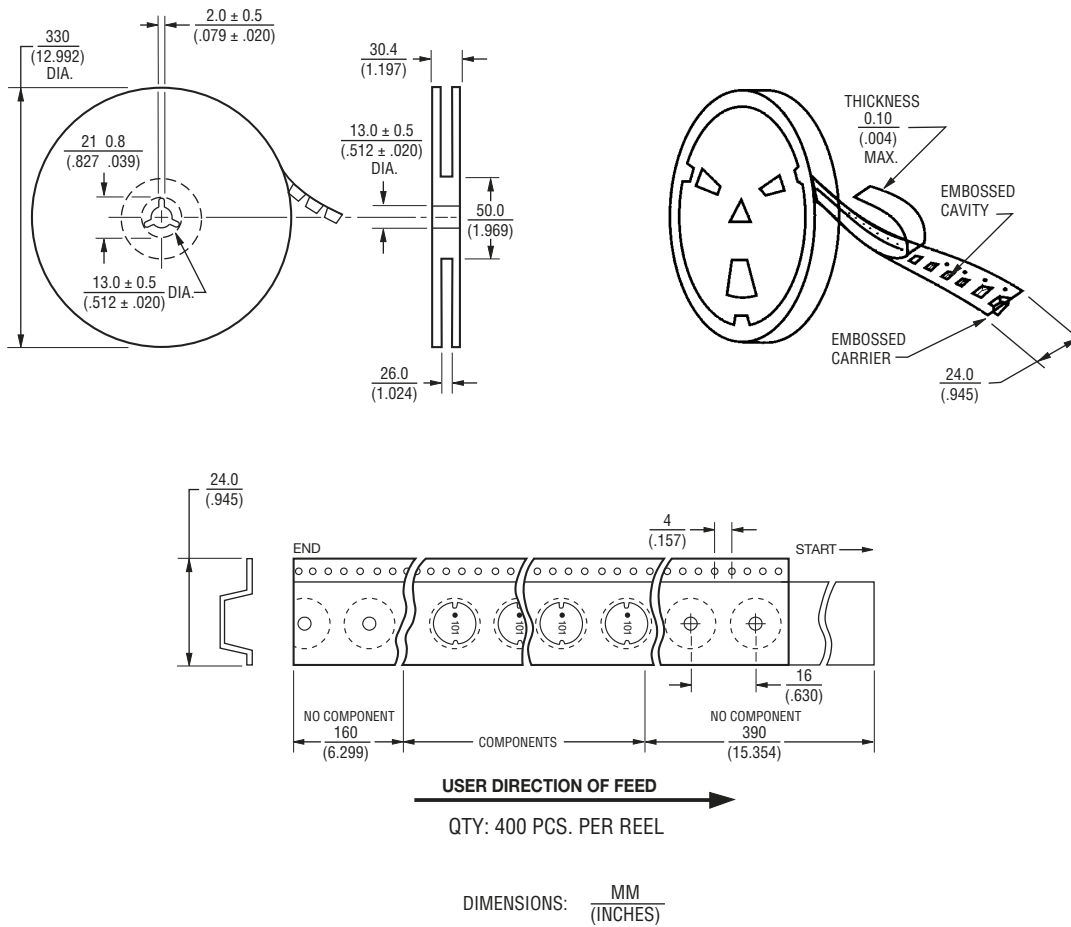
**WARNING Cancer and Reproductive Harm**  
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\*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.  
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# SDR1307 Series - SMD Power Inductors

**BOURNS®**

## Packaging Specifications



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