



## Features

- Available in E6 values
- Current rating to 7.2 amps
- RoHS compliant\*

## Applications

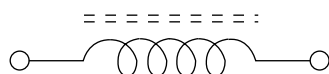
- Input/output of DC/DC converters
- Power supplies for:
  - Portable communication equipment
  - Camcorders
  - LCD TVs

# SDR1305 Series - SMD Power Inductors

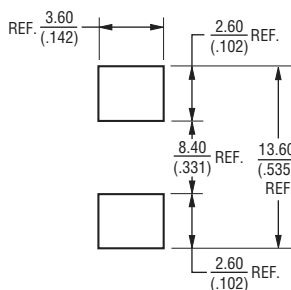
## Electrical Specifications

| Bourns<br>Part Number | Inductance<br>100 kHz |        | Q<br>Typ. | Test<br>Frequency<br>(MHz) | SRF<br>Min.<br>(MHz) | RDC<br>Max.<br>(Ω) | I rms<br>Max.<br>(A) | I sat<br>Typ.<br>(A) |
|-----------------------|-----------------------|--------|-----------|----------------------------|----------------------|--------------------|----------------------|----------------------|
|                       | (μH)                  | Tol. % |           |                            |                      |                    |                      |                      |
| SDR1305-2R5Y          | 2.5                   | ± 25   | 19        | 7.96                       | 61                   | 0.0098             | 7.20                 | 8.00                 |
| SDR1305-3R5Y          | 3.5                   | ± 25   | 20        | 7.96                       | 43                   | 0.0105             | 6.00                 | 7.00                 |
| SDR1305-4R6Y          | 4.6                   | ± 25   | 18        | 7.96                       | 35                   | 0.0165             | 5.20                 | 6.00                 |
| SDR1305-6R8Y          | 6.8                   | ± 25   | 17        | 7.96                       | 32                   | 0.0240             | 4.30                 | 5.20                 |
| SDR1305-100M          | 10.0                  | ± 20   | 35        | 2.52                       | 27                   | 0.0370             | 3.60                 | 4.40                 |
| SDR1305-150M          | 15.0                  | ± 20   | 28        | 2.52                       | 24                   | 0.0460             | 3.30                 | 3.70                 |
| SDR1305-220M          | 22.0                  | ± 20   | 27        | 2.52                       | 20                   | 0.0620             | 2.90                 | 3.00                 |
| SDR1305-330M          | 33.0                  | ± 20   | 23        | 2.52                       | 16                   | 0.0850             | 2.50                 | 2.60                 |
| SDR1305-470M          | 47.0                  | ± 20   | 24        | 2.52                       | 13                   | 0.1300             | 1.90                 | 2.00                 |
| SDR1305-680M          | 68.0                  | ± 20   | 22        | 2.52                       | 11                   | 0.1650             | 1.65                 | 1.80                 |
| SDR1305-101K          | 100.0                 | ± 10   | 20        | 0.796                      | 11                   | 0.2550             | 1.40                 | 1.40                 |
| SDR1305-151K          | 150.0                 | ± 10   | 17        | 0.796                      | 8                    | 0.3800             | 1.20                 | 1.15                 |
| SDR1305-221K          | 220.0                 | ± 10   | 16        | 0.796                      | 7                    | 0.5000             | 1.00                 | 0.95                 |
| SDR1305-331K          | 330.0                 | ± 10   | 11        | 0.796                      | 6                    | 0.7000             | 0.85                 | 0.80                 |
| SDR1305-471K          | 470.0                 | ± 10   | 14        | 0.796                      | 4                    | 1.1500             | 0.67                 | 0.70                 |
| SDR1305-681K          | 680.0                 | ± 10   | 12        | 0.796                      | 3.5                  | 1.4000             | 0.60                 | 0.58                 |
| SDR1305-102K          | 1000.0                | ± 10   | 41        | 0.252                      | 2.7                  | 2.3500             | 0.46                 | 0.47                 |
| SDR1045-102K          | 1000.0                | ± 10   | 25        | 0.252                      | 2.9                  | 4.700              | 0.38                 | 0.40                 |

## Electrical Schematic



## Recommended Layout



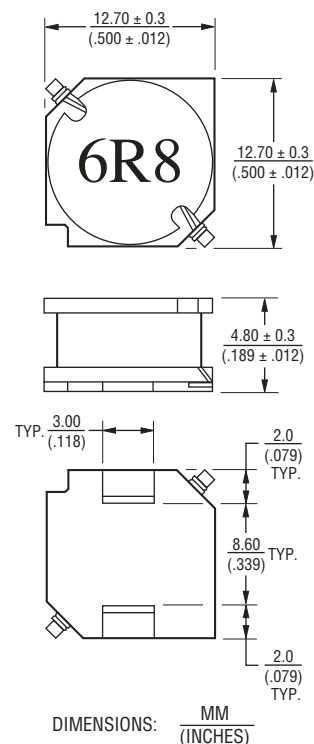
## General Specifications

Test Voltage ..... 10 mV  
 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 130  
 Terminal ..... Cu/Sn  
 Rated Current  
 ..... Ind. drop 25 % typ. at Isat  
 Temperature Rise  
 ..... 40 °C max. at rated I rms  
 Packaging..... 600 pcs. per reel

## Product Dimensions



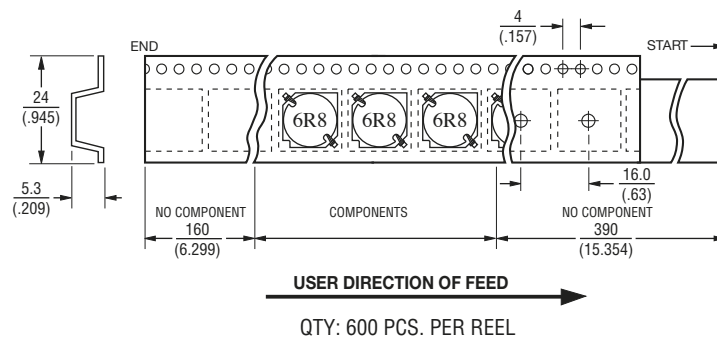
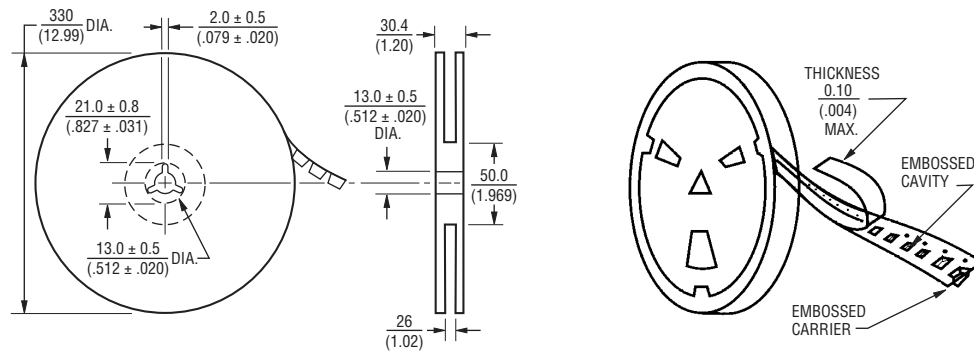
**WARNING Cancer and Reproductive Harm - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)**

\*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.  
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# SDR1305 Series - SMD Power Inductors

**BOURNS®**

## Packaging Specifications



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

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