



## Features

- Available in E12 series
- Low height of only 2.7 mm
- High Isat of 3.2 Amps
- RoHS compliant\*

## Applications

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

# SDR0703 Series - SMD Power Inductors

## Electrical Specifications

| Bourns Part No. | Inductance 100 kHz |        | Q Ref. | Test Frequency (MHz) | SRF Min. (MHz) | RDC (Ω) | I rms Max. (A) | I sat Typ. (A) |
|-----------------|--------------------|--------|--------|----------------------|----------------|---------|----------------|----------------|
|                 | (μH)               | Tol. % |        |                      |                |         |                |                |
| SDR0703-1R0ML   | 1.0                | ± 20   | 25     | 7.96                 | 160.0          | 0.042   | 2.20           | 3.20           |
| SDR0703-1R2ML   | 1.2                | ± 20   | 25     | 7.96                 | 145.0          | 0.047   | 2.00           | 3.00           |
| SDR0703-1R8ML   | 1.8                | ± 20   | 25     | 7.96                 | 105.0          | 0.052   | 1.90           | 2.70           |
| SDR0703-2R2ML   | 2.2                | ± 20   | 24     | 7.96                 | 95.0           | 0.060   | 1.80           | 2.60           |
| SDR0703-2R7ML   | 2.7                | ± 20   | 23     | 7.96                 | 80.0           | 0.065   | 1.70           | 2.50           |
| SDR0703-3R3ML   | 3.3                | ± 20   | 23     | 7.96                 | 65.0           | 0.075   | 1.65           | 2.35           |
| SDR0703-3R9ML   | 3.9                | ± 20   | 22     | 7.96                 | 70.0           | 0.080   | 1.58           | 2.25           |
| SDR0703-4R7ML   | 4.7                | ± 20   | 20     | 7.96                 | 60.0           | 0.100   | 1.50           | 2.10           |
| SDR0703-5R6ML   | 5.6                | ± 20   | 20     | 7.96                 | 56.0           | 0.105   | 1.40           | 2.00           |
| SDR0703-6R8ML   | 6.8                | ± 20   | 20     | 7.96                 | 45.0           | 0.115   | 1.30           | 1.90           |
| SDR0703-8R2ML   | 8.2                | ± 20   | 20     | 7.96                 | 40.0           | 0.150   | 1.10           | 1.50           |
| SDR0703-100KL   | 10                 | ± 10   | 23     | 2.52                 | 36.0           | 0.170   | 1.00           | 1.40           |
| SDR0703-120KL   | 12                 | ± 10   | 20     | 2.52                 | 36.0           | 0.180   | 0.90           | 1.30           |
| SDR0703-150KL   | 15                 | ± 10   | 23     | 2.52                 | 30.0           | 0.240   | 0.75           | 1.12           |
| SDR0703-180KL   | 18                 | ± 10   | 20     | 2.52                 | 30.0           | 0.280   | 0.70           | 1.05           |
| SDR0703-220KL   | 22                 | ± 10   | 20     | 2.52                 | 26.0           | 0.300   | 0.65           | 0.95           |
| SDR0703-270KL   | 27                 | ± 10   | 20     | 2.52                 | 20.0           | 0.400   | 0.60           | 0.88           |
| SDR0703-330KL   | 33                 | ± 10   | 17     | 2.52                 | 20.0           | 0.450   | 0.56           | 0.82           |
| SDR0703-390KL   | 39                 | ± 10   | 18     | 2.52                 | 18.0           | 0.550   | 0.50           | 0.73           |
| SDR0703-470KL   | 47                 | ± 10   | 20     | 2.52                 | 15.0           | 0.720   | 0.40           | 0.64           |
| SDR0703-560KL   | 56                 | ± 10   | 20     | 2.52                 | 13.0           | 0.800   | 0.39           | 0.60           |
| SDR0703-680KL   | 68                 | ± 10   | 18     | 2.52                 | 13.0           | 0.900   | 0.38           | 0.56           |
| SDR0703-820KL   | 82                 | ± 10   | 18     | 2.52                 | 12.0           | 1.18    | 0.33           | 0.47           |
| SDR0703-101KL   | 100                | ± 10   | 33     | 0.796                | 11.0           | 1.56    | 0.27           | 0.40           |
| SDR0703-121KL   | 120                | ± 10   | 32     | 0.796                | 10.0           | 1.75    | 0.26           | 0.37           |
| SDR0703-151KL   | 150                | ± 10   | 30     | 0.796                | 9.0            | 2.00    | 0.25           | 0.34           |
| SDR0703-181KL   | 180                | ± 10   | 33     | 0.796                | 7.0            | 2.70    | 0.19           | 0.30           |
| SDR0703-221KL   | 220                | ± 10   | 31     | 0.796                | 7.0            | 3.00    | 0.18           | 0.28           |
| SDR0703-271KL   | 270                | ± 10   | 30     | 0.796                | 7.0            | 3.60    | 0.17           | 0.22           |
| SDR0703-331KL   | 330                | ± 10   | 33     | 0.796                | 6.0            | 4.80    | 0.16           | 0.19           |
| SDR0703-391KL   | 390                | ± 10   | 36     | 0.796                | 5.5            | 6.20    | 0.14           | 0.18           |
| SDR0703-471KL   | 470                | ± 10   | 33     | 0.796                | 5.0            | 7.00    | 0.13           | 0.16           |
| SDR0703-561KL   | 560                | ± 10   | 36     | 0.796                | 4.2            | 9.20    | 0.11           | 0.15           |
| SDR0703-681KL   | 680                | ± 10   | 32     | 0.796                | 4.0            | 10.50   | 0.10           | 0.15           |
| SDR0703-821KL   | 820                | ± 10   | 32     | 0.796                | 3.6            | 12.00   | 0.09           | 0.14           |
| SDR0703-102KL   | 1000               | ± 10   | 30     | 0.252                | 3.2            | 14.20   | 0.08           | 0.13           |

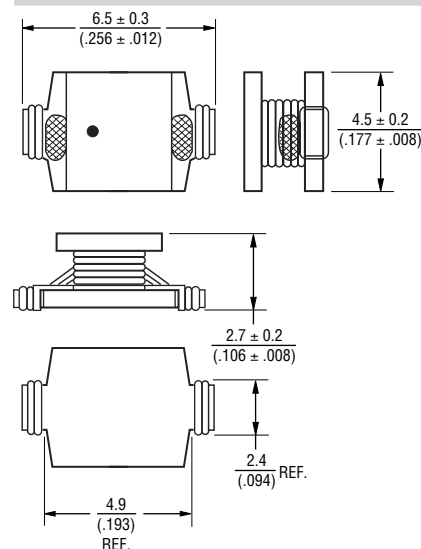
## General Specifications

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.

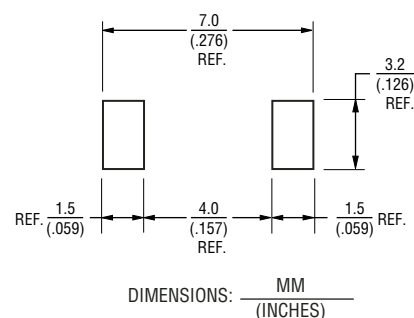
## Materials

Core .....Ferrite  
 Wire .....Enameled copper 130 °C  
 Base.....LCP  
 Adhesive.....6020H-6  
 Terminal .....Cu/Sn  
 Rated Current  
 .....Ind. drop 10 % typ. at Isat  
 Temperature Rise .....20 °C max.  
 at rated I rms  
 Packaging .....500 pcs. per reel

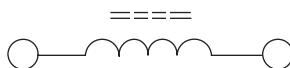
## Product Dimensions



## Recommended Layout



## Electrical Schematic

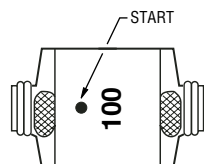


\*RoHS Directive 2002/95/EC Jan 27 2003 including Annex  
 Specifications are subject to change without notice.  
 Customers should verify actual device performance in their specific applications.

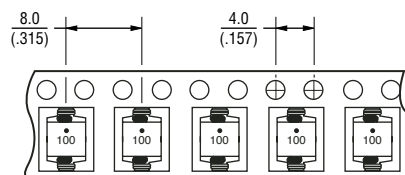
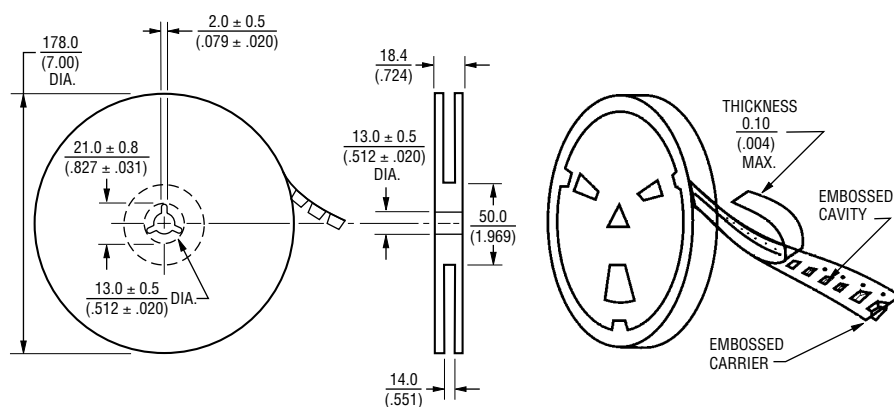
# SDR0703 Series - SMD Power Inductors

**BOURNS®**

## Typical Part Marking



## Packaging Specifications



QTY: 500 PCS. PER REEL

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

REV. 05/05

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