



**THE DATASHEET OF  
SDR0906-220ML**





### Features

- High inductance up to 1.2 mH
- E12 series available
- Wide inductance range
- RoHS compliant\*

### Applications

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

## SDR0906 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. % |        |                      |                |              |                |                |
| SDR0906-2R2ML      | 2.2              | ± 20   | 30     | 7.96                 | 105            | 0.03         | 4.00           | 6.70           |
| SDR0906-2R7ML      | 2.7              | ± 20   | 30     | 7.96                 | 84             | 0.04         | 3.50           | 6.50           |
| SDR0906-3R9ML      | 3.9              | ± 20   | 28     | 7.96                 | 77             | 0.04         | 3.30           | 5.50           |
| SDR0906-4R7ML      | 4.7              | ± 20   | 27     | 7.96                 | 55             | 0.05         | 3.00           | 4.80           |
| SDR0906-5R6ML      | 5.6              | ± 20   | 28     | 7.96                 | 42             | 0.06         | 2.80           | 4.50           |
| SDR0906-6R8ML      | 6.8              | ± 20   | 27     | 7.96                 | 36             | 0.06         | 2.60           | 4.50           |
| SDR0906-8R2ML      | 8.2              | ± 20   | 27     | 7.96                 | 29             | 0.07         | 2.40           | 4.00           |
| SDR0906-100ML      | 10               | ± 20   | 35     | 2.52                 | 25             | 0.09         | 2.10           | 3.20           |
| SDR0906-120ML      | 12               | ± 20   | 35     | 2.52                 | 23             | 0.10         | 2.00           | 3.10           |
| SDR0906-150ML      | 15               | ± 20   | 35     | 2.52                 | 22             | 0.11         | 1.90           | 2.90           |
| SDR0906-180ML      | 18               | ± 20   | 35     | 2.52                 | 19             | 0.12         | 1.80           | 2.40           |
| SDR0906-220ML      | 22               | ± 20   | 35     | 2.52                 | 16             | 0.13         | 1.60           | 2.40           |
| SDR0906-270KL      | 27               | ± 10   | 35     | 2.52                 | 15             | 0.15         | 1.40           | 2.20           |
| SDR0906-330KL      | 33               | ± 10   | 35     | 2.52                 | 14             | 0.18         | 1.25           | 2.00           |
| SDR0906-390KL      | 39               | ± 10   | 25     | 2.52                 | 13             | 0.19         | 1.15           | 1.60           |
| SDR0906-470KL      | 47               | ± 10   | 25     | 2.52                 | 12             | 0.23         | 1.10           | 1.50           |
| SDR0906-560KL      | 56               | ± 10   | 25     | 2.52                 | 12             | 0.26         | 1.05           | 1.40           |
| SDR0906-680KL      | 68               | ± 10   | 20     | 2.52                 | 10             | 0.31         | 1.00           | 1.40           |
| SDR0906-820KL      | 82               | ± 10   | 20     | 2.52                 | 9              | 0.33         | 0.95           | 1.30           |
| SDR0906-101KL      | 100              | ± 10   | 15     | 0.796                | 8              | 0.39         | 0.90           | 1.10           |
| SDR0906-121KL      | 120              | ± 10   | 15     | 0.796                | 8              | 0.43         | 0.85           | 1.10           |
| SDR0906-151KL      | 150              | ± 10   | 15     | 0.796                | 7              | 0.56         | 0.75           | 0.90           |
| SDR0906-181KL      | 180              | ± 10   | 15     | 0.796                | 6              | 0.64         | 0.70           | 0.82           |
| SDR0906-221KL      | 220              | ± 10   | 20     | 0.796                | 6              | 0.85         | 0.60           | 0.80           |
| SDR0906-271KL      | 270              | ± 10   | 20     | 0.796                | 5              | 1.00         | 0.55           | 0.76           |
| SDR0906-331KL      | 330              | ± 10   | 15     | 0.796                | 5              | 1.27         | 0.50           | 0.65           |
| SDR0906-391KL      | 390              | ± 10   | 15     | 0.796                | 5              | 1.40         | 0.45           | 0.64           |
| SDR0906-471KL      | 470              | ± 10   | 15     | 0.796                | 5              | 1.63         | 0.40           | 0.57           |
| SDR0906-561KL      | 560              | ± 10   | 15     | 0.796                | 4              | 2.10         | 0.32           | 0.53           |
| SDR0906-681KL      | 680              | ± 10   | 15     | 0.796                | 4              | 2.40         | 0.28           | 0.46           |
| SDR0906-821KL      | 820              | ± 10   | 15     | 0.796                | 3              | 2.75         | 0.24           | 0.36           |
| SDR0906-102KL      | 1000             | ± 10   | 60     | 0.252                | 2              | 3.50         | 0.22           | 0.35           |
| SDR0906-122KL      | 1200             | ± 10   | 60     | 0.252                | 2              | 4.00         | 0.20           | 0.28           |
| SDR0906-152KL      | 1500             | ± 10   | 70     | 0.252                | 2              | 5.00         | 0.18           | 0.26           |
| SDR0906-182KL      | 1800             | ± 10   | 60     | 0.252                | 2              | 5.80         | 0.17           | 0.24           |
| SDR0906-222KL      | 2200             | ± 10   | 94     | 0.252                | 2              | 8.00         | 0.14           | 0.23           |
| SDR0906-272KL      | 2700             | ± 10   | 90     | 0.252                | 1              | 9.00         | 0.13           | 0.23           |
| SDR0906-332KL      | 3300             | ± 10   | 78     | 0.252                | 1              | 10.00        | 0.12           | 0.18           |
| SDR0906-392KL      | 3900             | ± 10   | 96     | 0.252                | 1              | 13.50        | 0.10           | 0.18           |
| SDR0906-472KL      | 4700             | ± 10   | 86     | 0.252                | 1              | 15.00        | 0.09           | 0.16           |
| SDR0906-562KL      | 5600             | ± 10   | 100    | 0.252                | 1              | 20.00        | 0.07           | 0.15           |
| SDR0906-682KL      | 6800             | ± 10   | 90     | 0.252                | 1              | 23.00        | 0.06           | 0.14           |
| SDR0906-822KL      | 8200             | ± 10   | 100    | 0.252                | 1              | 28.00        | 0.05           | 0.12           |
| SDR0906-103KL      | 10000            | ± 10   | 100    | 0.0796               | 1              | 33.00        | 0.04           | 0.10           |

Multiple windings possible (up to four windings).

### Electrical Schematic



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

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### 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

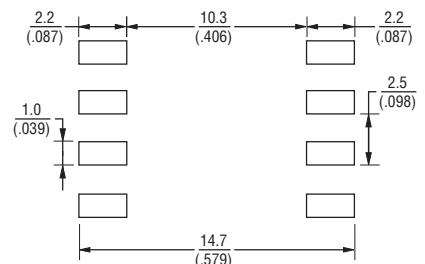
### Materials

Core..... Ferrite DR core  
 Wire ..... Enameled copper wire  
 Base ..... LCP  
 Adhesive..... Epoxy resin  
 Terminal..... Cu/Sn  
 Rated Current ..... Ind. drop 10 % typ. at Isat  
 Temperature Rise ..... 40 °C max. at rated I rms  
 Packaging..... 600 pcs. per reel

### Product Dimensions



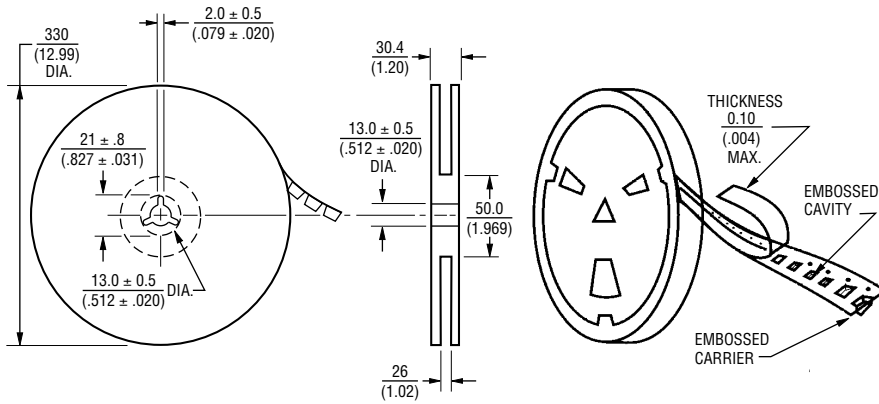
### Recommended Layout



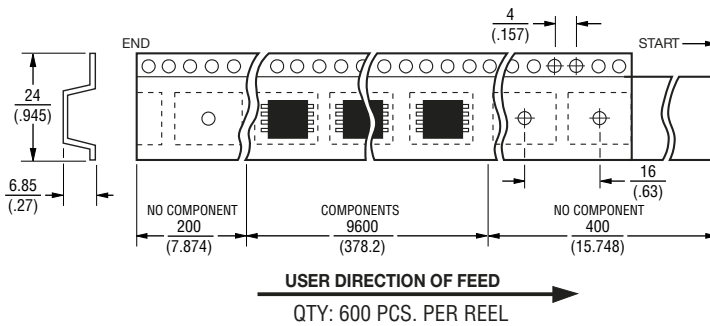
# SDR0906 Series - SMD Power Inductors

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## Packaging Specifications



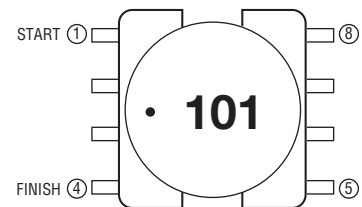
DIMENSIONS:  $\frac{\text{MM}}{\text{(INCHES)}}$



## Materials

Paper  
Plastics

## Typical Part Marking



## Strength of Cover Tape



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

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-  Alternative Solution
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