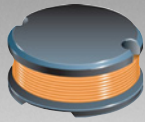




**THE DATASHEET OF  
SDR0403-221KL**



\*RoHS COMPLIANT



**BOURNS®**

### Features

- Available in E12 series
- Low profile of only 3.2 mm
- Low inductance values
- RoHS compliant\*

### Applications

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

## SDR0403 Series - SMD Power Inductors

### Electrical Specifications

| Bourns Part No. | Inductance 1kHz |        | Q Ref. | Test Frequency (MHz) | SRF Min. (MHz) | RDC Max. (Ω) | I rms Max. (A) | I sat Typ. (A) |
|-----------------|-----------------|--------|--------|----------------------|----------------|--------------|----------------|----------------|
|                 | (μH)            | Tol. % |        |                      |                |              |                |                |
| SDR0403-1R0ML   | 1.0             | ± 20   | 28     | 7.96                 | 150            | 0.033        | 3.80           | 5.50           |
| SDR0403-1R4ML   | 1.4             | ± 20   | 28     | 7.96                 | 110            | 0.038        | 3.30           | 5.10           |
| SDR0403-1R8ML   | 1.8             | ± 20   | 28     | 7.96                 | 90             | 0.042        | 2.91           | 4.40           |
| SDR0403-2R2ML   | 2.2             | ± 20   | 28     | 7.96                 | 80             | 0.047        | 2.60           | 3.90           |
| SDR0403-2R7ML   | 2.7             | ± 20   | 28     | 7.96                 | 75             | 0.052        | 2.43           | 3.50           |
| SDR0403-3R3ML   | 3.3             | ± 20   | 28     | 7.96                 | 65             | 0.058        | 2.15           | 3.00           |
| SDR0403-3R9ML   | 3.9             | ± 20   | 28     | 7.96                 | 55             | 0.076        | 1.98           | 2.70           |
| SDR0403-4R7ML   | 4.7             | ± 20   | 28     | 7.96                 | 50             | 0.094        | 1.70           | 2.60           |
| SDR0403-5R6ML   | 5.6             | ± 20   | 28     | 7.96                 | 45             | 0.10         | 1.60           | 2.40           |
| SDR0403-6R8ML   | 6.8             | ± 20   | 28     | 7.96                 | 40             | 0.12         | 1.41           | 2.10           |
| SDR0403-8R2ML   | 8.2             | ± 20   | 28     | 7.96                 | 36             | 0.13         | 1.26           | 1.90           |
| SDR0403-100ML   | 10              | ± 20   | 28     | 2.52                 | 33             | 0.18         | 1.15           | 1.70           |
| SDR0403-120ML   | 12              | ± 20   | 28     | 2.52                 | 30             | 0.21         | 1.05           | 1.60           |
| SDR0403-150ML   | 15              | ± 20   | 28     | 2.52                 | 28             | 0.24         | 0.92           | 1.40           |
| SDR0403-180ML   | 18              | ± 20   | 25     | 2.52                 | 23             | 0.34         | 0.84           | 1.30           |
| SDR0403-220ML   | 22              | ± 20   | 25     | 2.52                 | 20             | 0.38         | 0.76           | 1.20           |
| SDR0403-270KL   | 27              | ± 10   | 23     | 2.52                 | 17             | 0.52         | 0.71           | 1.00           |
| SDR0403-330KL   | 33              | ± 10   | 23     | 2.52                 | 15             | 0.54         | 0.64           | 0.99           |
| SDR0403-390KL   | 39              | ± 10   | 20     | 2.52                 | 14             | 0.59         | 0.59           | 0.92           |
| SDR0403-470KL   | 47              | ± 10   | 20     | 2.52                 | 13             | 0.84         | 0.54           | 0.78           |
| SDR0403-560KL   | 56              | ± 10   | 20     | 2.52                 | 12             | 0.94         | 0.50           | 0.74           |
| SDR0403-680KL   | 68              | ± 10   | 20     | 2.52                 | 11             | 1.12         | 0.46           | 0.68           |
| SDR0403-820KL   | 82              | ± 10   | 25     | 2.52                 | 10             | 1.27         | 0.42           | 0.58           |
| SDR0403-101KL   | 100             | ± 10   | 35     | 0.796                | 9              | 1.90         | 0.35           | 0.51           |
| SDR0403-121KL   | 120             | ± 10   | 50     | 0.796                | 8              | 2.20         | 0.32           | 0.44           |
| SDR0403-151KL   | 150             | ± 10   | 50     | 0.796                | 8              | 3.40         | 0.26           | 0.40           |
| SDR0403-181KL   | 180             | ± 10   | 50     | 0.796                | 5              | 3.90         | 0.24           | 0.39           |
| SDR0403-221KL   | 220             | ± 10   | 50     | 0.796                | 4              | 4.40         | 0.22           | 0.33           |
| SDR0403-271KL   | 270             | ± 10   | 45     | 0.796                | 3              | 5.00         | 0.20           | 0.30           |
| SDR0403-331KL   | 330             | ± 10   | 40     | 0.796                | 4              | 6.00         | 0.17           | 0.25           |
| SDR0403-391KL   | 390             | ± 10   | 40     | 0.796                | 3.5            | 6.40         | 0.15           | 0.22           |
| SDR0403-471KL   | 470             | ± 10   | 50     | 0.796                | 3              | 7.00         | 0.13           | 0.19           |
| SDR0403-561KL   | 560             | ± 10   | 50     | 0.796                | 2.8            | 7.80         | 0.12           | 0.18           |
| SDR0403-681KL   | 680             | ± 10   | 40     | 0.796                | 2.8            | 8.60         | 0.11           | 0.16           |
| SDR0403-821KL   | 820             | ± 10   | 38     | 0.796                | 2.5            | 12.00        | 0.10           | 0.15           |
| SDR0403-102KL   | 1000            | ± 10   | 38     | 0.252                | 2              | 14.00        | 0.09           | 0.13           |

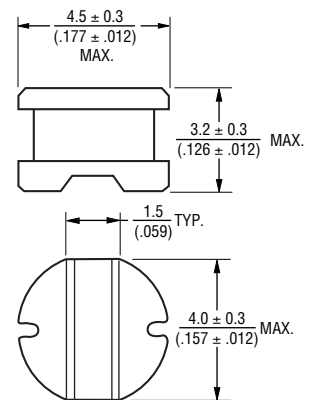
### General Specifications

Test Voltage ..... 1 V  
 Operating Temperature ... -40 °C to +125 °C  
 (Temperature rise included)  
 Storage Temperature... -55 °C to +125 °C  
 Moisture Sensitivity Level..... 1  
 ESD Classification (HBM)..... N/A

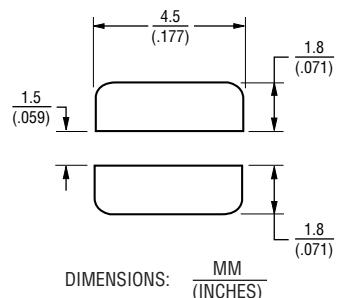
### Materials

Core..... Ferrite DR  
 Wire ..... Enameled copper  
 Terminal..... Ag/Ni/Sn  
 Rated Current.. Ind. drop 10 % typ. at Isat  
 Temp. Rise..... 40 °C max. at rated Irms  
 Packaging..... 2000 pcs. per reel

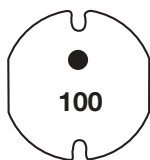
### Product Dimensions



### Recommended Layout



### Typical Part Marking



### Electrical Schematic



**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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# SDR0403 Series - SMD Power Inductors

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## Packaging Specifications



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