



**THE DATASHEET OF
SDR0603-470KL**





Features

- Available in E12 series
- Small design of only 5.8 mm maximum diameter
- Low 3.9 mm profile
- RoHS compliant*

Applications

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

SDR0603 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. % | | | | | | |
| SDR0603-1R5ML | 1.5 | ± 20 | 24 | 7.96 | 85 | 0.04 | 3.00 | 3.50 |
| SDR0603-2R5ML | 2.5 | ± 20 | 21 | 7.96 | 74 | 0.05 | 2.35 | 2.70 |
| SDR0603-3R3ML | 3.3 | ± 20 | 21 | 7.96 | 68 | 0.05 | 2.20 | 2.60 |
| SDR0603-3R9ML | 3.9 | ± 20 | 22 | 7.96 | 62 | 0.05 | 2.10 | 2.20 |
| SDR0603-4R7ML | 4.7 | ± 20 | 20 | 7.96 | 56 | 0.07 | 1.80 | 2.20 |
| SDR0603-5R0ML | 5.0 | ± 20 | 19 | 7.96 | 50 | 0.07 | 1.60 | 2.10 |
| SDR0603-6R8ML | 6.8 | ± 20 | 19 | 7.96 | 44 | 0.11 | 1.38 | 1.80 |
| SDR0603-7R5ML | 7.5 | ± 20 | 19 | 7.96 | 38 | 0.12 | 1.29 | 1.60 |
| SDR0603-100ML | 10 | ± 20 | 24 | 2.52 | 34 | 0.15 | 1.14 | 1.40 |
| SDR0603-120ML | 12 | ± 20 | 23 | 2.52 | 30 | 0.16 | 1.02 | 1.30 |
| SDR0603-150ML | 15 | ± 20 | 22 | 2.52 | 28 | 0.18 | 0.93 | 1.10 |
| SDR0603-180ML | 18 | ± 20 | 23 | 2.52 | 24 | 0.25 | 0.82 | 1.10 |
| SDR0603-220ML | 22 | ± 20 | 20 | 2.52 | 30 | 0.28 | 0.75 | 0.96 |
| SDR0603-270ML | 27 | ± 20 | 19 | 2.52 | 19 | 0.30 | 0.67 | 0.86 |
| SDR0603-330KL | 33 | ± 10 | 23 | 2.52 | 15 | 0.45 | 0.61 | 0.70 |
| SDR0603-390KL | 39 | ± 10 | 22 | 2.52 | 13 | 0.46 | 0.56 | 0.66 |
| SDR0603-470KL | 47 | ± 10 | 20 | 2.52 | 13 | 0.55 | 0.52 | 0.62 |
| SDR0603-560KL | 56 | ± 10 | 17 | 2.52 | 12 | 0.62 | 0.48 | 0.58 |
| SDR0603-680KL | 68 | ± 10 | 17 | 2.52 | 12 | 0.72 | 0.44 | 0.54 |
| SDR0603-820KL | 82 | ± 10 | 15 | 2.52 | 11 | 0.84 | 0.40 | 0.48 |
| SDR0603-101KL | 100 | ± 10 | 28 | 0.796 | 10 | 0.95 | 0.38 | 0.66 |
| SDR0603-121KL | 120 | ± 10 | 27 | 0.796 | 8 | 1.10 | 0.36 | 0.60 |
| SDR0603-151KL | 150 | ± 10 | 28 | 0.796 | 8 | 1.43 | 0.32 | 0.56 |
| SDR0603-181KL | 180 | ± 10 | 26 | 0.796 | 7 | 1.60 | 0.30 | 0.50 |
| SDR0603-221KL | 220 | ± 10 | 26 | 0.796 | 6 | 2.00 | 0.26 | 0.46 |
| SDR0603-271KL | 270 | ± 10 | 26 | 0.796 | 5 | 2.40 | 0.24 | 0.38 |
| SDR0603-331KL | 330 | ± 10 | 28 | 0.796 | 5 | 3.20 | 0.20 | 0.36 |
| SDR0603-391KL | 390 | ± 10 | 28 | 0.796 | 4 | 3.40 | 0.18 | 0.32 |
| SDR0603-471KL | 470 | ± 10 | 29 | 0.796 | 4 | 4.55 | 0.15 | 0.26 |

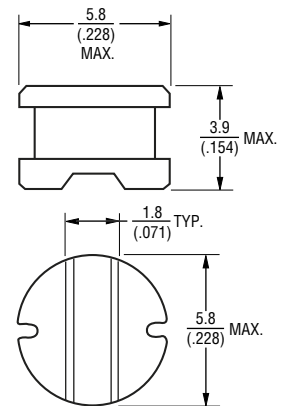
General Specifications

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

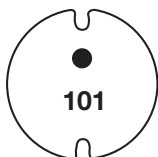
Materials

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

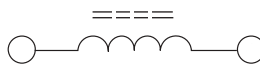
Product Dimensions



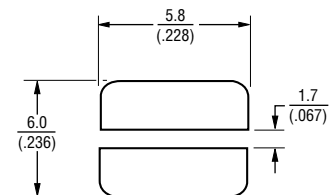
Typical Part Marking



Electrical Schematic



Recommended Layout



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



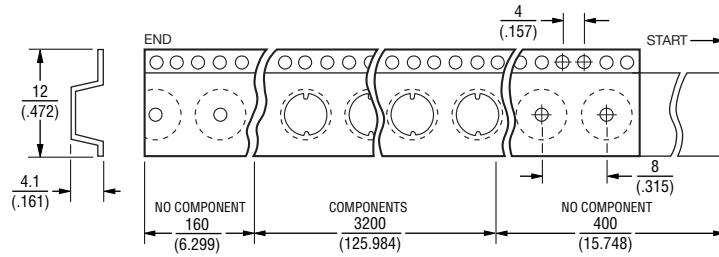
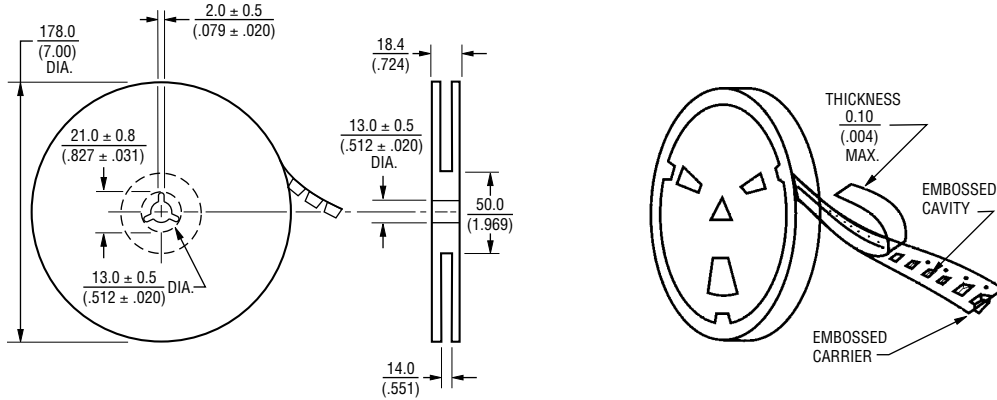
WARNING Cancer and Reproductive Harm
www.P65Warnings.ca.gov

*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.
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SDR0603 Series - SMD Power Inductors

BOURNS®

Packaging Specifications



USER DIRECTION OF FEED →
QTY: 400 PCS. PER REEL

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

BOURNS®

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REV. 03/18

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