



Features

- Available in E12 series
- Low profile of only 3.3 mm
- High inductance of 15 mH
- RoHS compliant*

Applications

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

SDR0503 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. % | | | | | | |
| SDR0503-100ML | 10 | ± 20 | 10 | 2.52 | 30.0 | 0.13 | 1.300 | 1.600 |
| SDR0503-120ML | 12 | ± 20 | 20 | 2.52 | 29.0 | 0.16 | 1.200 | 1.450 |
| SDR0503-150ML | 15 | ± 20 | 20 | 2.52 | 27.0 | 0.19 | 1.050 | 1.260 |
| SDR0503-180ML | 18 | ± 20 | 20 | 2.52 | 24.0 | 0.21 | 0.950 | 1.300 |
| SDR0503-220ML | 22 | ± 20 | 20 | 2.52 | 22.0 | 0.28 | 0.900 | 1.060 |
| SDR0503-270ML | 27 | ± 20 | 20 | 2.52 | 20.0 | 0.32 | 0.800 | 1.000 |
| SDR0503-330KL | 33 | ± 10 | 15 | 2.52 | 18.0 | 0.38 | 0.700 | 0.850 |
| SDR0503-390KL | 39 | ± 10 | 15 | 2.52 | 17.0 | 0.42 | 0.650 | 0.800 |
| SDR0503-470KL | 47 | ± 10 | 20 | 2.52 | 14.0 | 0.60 | 0.600 | 0.750 |
| SDR0503-560KL | 56 | ± 10 | 20 | 2.52 | 13.0 | 0.71 | 0.500 | 0.700 |
| SDR0503-680KL | 68 | ± 10 | 20 | 2.52 | 12.0 | 0.76 | 0.450 | 0.600 |
| SDR0503-820KL | 82 | ± 10 | 15 | 2.52 | 10.0 | 0.88 | 0.420 | 0.520 |
| SDR0503-101KL | 100 | ± 10 | 40 | 0.796 | 9.0 | 1.60 | 0.400 | 0.480 |
| SDR0503-121KL | 120 | ± 10 | 40 | 0.796 | 8.0 | 1.70 | 0.370 | 0.450 |
| SDR0503-151KL | 150 | ± 10 | 40 | 0.796 | 7.0 | 2.00 | 0.330 | 0.400 |
| SDR0503-181KL | 180 | ± 10 | 40 | 0.796 | 7.0 | 2.30 | 0.300 | 0.350 |
| SDR0503-221KL | 220 | ± 10 | 35 | 0.796 | 6.0 | 2.50 | 0.250 | 0.340 |
| SDR0503-271KL | 270 | ± 10 | 35 | 0.796 | 6.0 | 2.90 | 0.230 | 0.280 |
| SDR0503-331KL | 330 | ± 10 | 30 | 0.796 | 5.0 | 3.30 | 0.210 | 0.280 |
| SDR0503-391KL | 390 | ± 10 | 30 | 0.796 | 5.0 | 3.70 | 0.190 | 0.240 |
| SDR0503-471KL | 470 | ± 10 | 30 | 0.796 | 5.0 | 4.90 | 0.180 | 0.220 |
| SDR0503-561KL | 560 | ± 10 | 30 | 0.796 | 4.0 | 5.70 | 0.160 | 0.190 |
| SDR0503-681KL | 680 | ± 10 | 30 | 0.796 | 4.0 | 7.50 | 0.140 | 0.160 |
| SDR0503-821KL | 820 | ± 10 | 40 | 0.796 | 3.0 | 10.00 | 0.120 | 0.155 |
| SDR0503-102KL | 1000 | ± 10 | 40 | 0.252 | 3.0 | 11.50 | 0.110 | 0.135 |
| SDR0503-122JL | 1200 | ± 5 | 40 | 0.252 | 3.0 | 12.00 | 0.063 | 0.090 |
| SDR0503-152JL | 1500 | ± 5 | 40 | 0.252 | 2.0 | 13.00 | 0.059 | 0.072 |
| SDR0503-182JL | 1800 | ± 5 | 40 | 0.252 | 2.0 | 15.00 | 0.055 | 0.070 |
| SDR0503-222JL | 2200 | ± 5 | 40 | 0.252 | 2.0 | 22.00 | 0.053 | 0.070 |
| SDR0503-272JL | 2700 | ± 5 | 40 | 0.252 | 2.0 | 26.00 | 0.050 | 0.070 |
| SDR0503-332JL | 3300 | ± 5 | 40 | 0.252 | 2.0 | 38.00 | 0.045 | 0.062 |
| SDR0503-392JL | 3900 | ± 5 | 40 | 0.252 | 2.0 | 40.00 | 0.042 | 0.060 |
| SDR0503-472JL | 4700 | ± 5 | 40 | 0.252 | 1.0 | 48.00 | 0.040 | 0.050 |
| SDR0503-502JL | 5000 | ± 5 | 40 | 0.252 | 1.0 | 60.00 | 0.039 | 0.050 |
| SDR0503-562JL | 5600 | ± 5 | 40 | 0.252 | 1.0 | 72.00 | 0.038 | 0.050 |
| SDR0503-682JL | 6800 | ± 5 | 40 | 0.252 | 1.0 | 80.00 | 0.034 | 0.045 |
| SDR0503-822JL | 8200 | ± 5 | 40 | 0.252 | 1.0 | 92.00 | 0.030 | 0.045 |
| SDR0503-103JL | 10000 | ± 5 | 30 | 0.0796 | 1.0 | 110.00 | 0.027 | 0.040 |
| SDR0503-123JL | 12000 | ± 5 | 30 | 0.0796 | 1.0 | 148.00 | 0.025 | 0.038 |
| SDR0503-153JL | 15000 | ± 5 | 30 | 0.0796 | 1.0 | 168.00 | 0.020 | 0.032 |

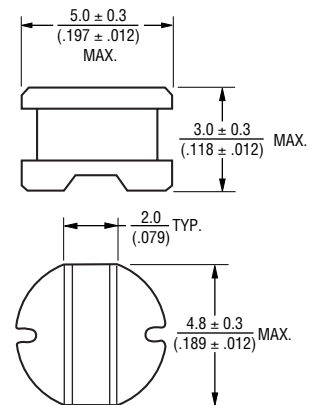
General Specifications

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

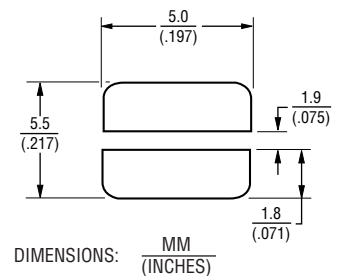
Materials

Core Ferrite DR
 Wire Enameled copper
 Terminal Ag/Ni/Sn
 Rated Current .. Ind. drop 10 % typ. at Isat
 Temp. Rise 40 °C max. at rated Irms
 Packaging 500 pcs. per reel

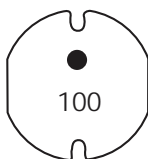
Product Dimensions



Recommended Layout



Typical Part Marking



Electrical Schematic



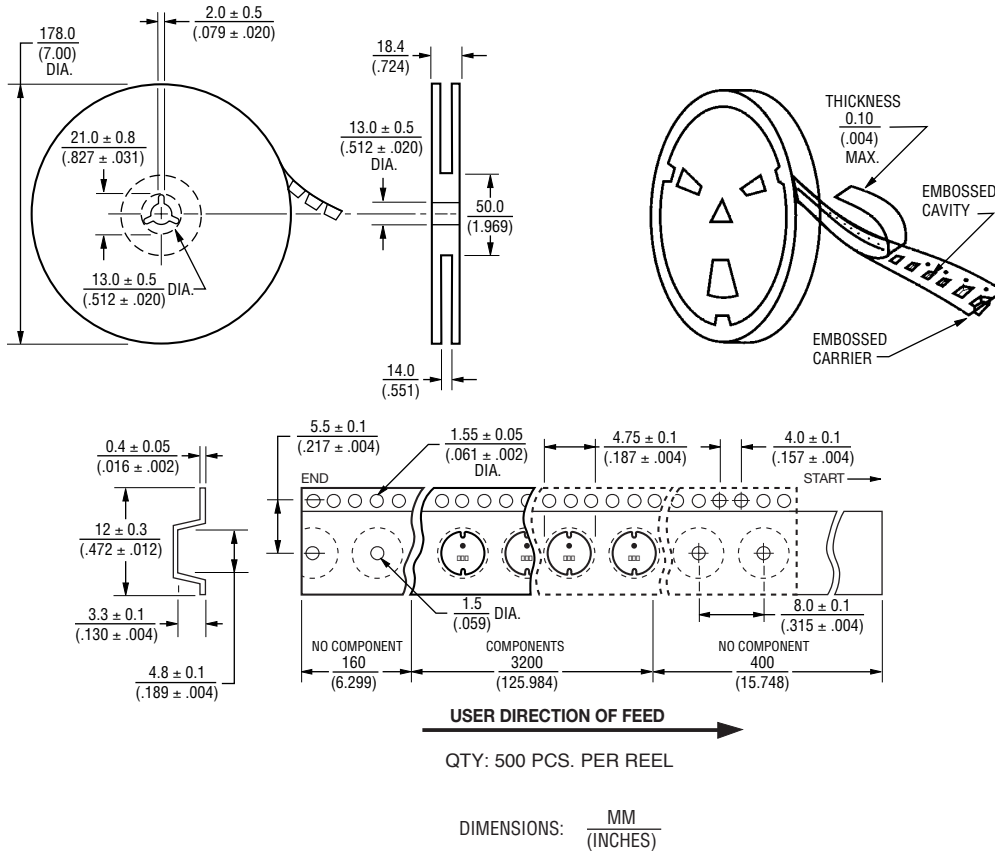
*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011. Specifications are subject to change without notice.

The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time. Users should verify actual device performance in their specific applications.

SDR0503 Series - SMD Power Inductors

BOURNS®

Packaging Specifications



REV. 02/18

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