



**THE DATASHEET OF
SDR1005-822KL**





Features

- Available in E6 series
- Low profile of only 5.0 mm
- Inductance as low as 0.68 μH
- RoHS compliant*

Applications

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

SDR1005 Series - SMD Power Inductors

Electrical Specifications

| Bourns Part Number | Inductance 1 kHz | | Q Ref. | Test Frequency Q (MHz) | SRF Min. (MHz) | RDC Max. (Ω) | I rms Max. (A) | I sat Typ. (A) |
|--------------------|---------------------|----------|-----------|------------------------------|----------------------|-----------------------------|----------------------|----------------------|
| | (μH) | Tol. % | | | | | | |
| SDR1005-R68ML | 0.68 | ± 20 | 26 | 7.960 | 160 | 0.006 | 8.50 | 9.50 |
| SDR1005-1R0ML | 1 | ± 20 | 55 | 2.600 | 137 | 0.007 | 7.50 | 9.00 |
| SDR1005-1R5ML | 1.5 | ± 20 | 50 | 3.000 | 95 | 0.009 | 6.50 | 8.00 |
| SDR1005-2R2ML | 2.2 | ± 20 | 51 | 2.470 | 65 | 0.012 | 6.10 | 7.00 |
| SDR1005-2R5ML | 2.5 | ± 20 | 49 | 3.000 | 56 | 0.012 | 5.50 | 7.00 |
| SDR1005-3R3ML | 3.3 | ± 20 | 45 | 2.520 | 54 | 0.015 | 5.00 | 6.40 |
| SDR1005-4R7ML | 4.7 | ± 20 | 46 | 2.700 | 42 | 0.019 | 4.50 | 5.40 |
| SDR1005-6R8ML | 6.8 | ± 20 | 56 | 2.000 | 31 | 0.030 | 3.40 | 4.50 |
| SDR1005-100ML | 10 | ± 20 | 43 | 4.000 | 26 | 0.050 | 2.90 | 3.70 |
| SDR1005-150ML | 15 | ± 20 | 42 | 2.700 | 22 | 0.060 | 2.50 | 3.00 |
| SDR1005-220ML | 22 | ± 20 | 29 | 2.520 | 18 | 0.10 | 2.00 | 2.50 |
| SDR1005-330KL | 33 | ± 10 | 29 | 2.200 | 14 | 0.12 | 1.80 | 2.00 |
| SDR1005-470KL | 47 | ± 10 | 30 | 2.200 | 12 | 0.19 | 1.40 | 1.60 |
| SDR1005-680KL | 68 | ± 10 | 24 | 2.200 | 11 | 0.24 | 1.20 | 1.40 |
| SDR1005-101KL | 100 | ± 10 | 41 | 0.056 | 8 | 0.33 | 1.00 | 1.20 |
| SDR1005-151KL | 150 | ± 10 | 58 | 0.087 | 6 | 0.59 | 0.80 | 1.00 |
| SDR1005-221KL | 220 | ± 10 | 50 | 0.068 | 5 | 0.78 | 0.70 | 0.80 |
| SDR1005-331KL | 330 | ± 10 | 56 | 0.070 | 4 | 1.15 | 0.55 | 0.60 |
| SDR1005-471KL | 470 | ± 10 | 60 | 0.081 | 4 | 1.70 | 0.45 | 0.50 |
| SDR1005-681KL | 680 | ± 10 | 72 | 0.096 | 3 | 2.60 | 0.35 | 0.40 |
| SDR1005-102KL | 1000 | ± 10 | 78 | 0.122 | 2 | 3.90 | 0.30 | 0.35 |
| SDR1005-152KL | 1500 | ± 10 | 97 | 0.131 | 2 | 6.30 | 0.25 | 0.30 |
| SDR1005-222KL | 2200 | ± 10 | 85 | 0.128 | 2 | 8.20 | 0.20 | 0.24 |
| SDR1005-332KL | 3300 | ± 10 | 106 | 0.128 | 1 | 14.00 | 0.16 | 0.18 |
| SDR1005-472KL | 4700 | ± 10 | 96 | 0.125 | 1 | 17.00 | 0.15 | 0.16 |
| SDR1005-682KL | 6800 | ± 10 | 105 | 0.171 | 1 | 30.00 | 0.11 | 0.12 |
| SDR1005-822KL | 8200 | ± 10 | 102 | 0.145 | 1 | 34.00 | 0.11 | 0.12 |
| SDR1005-103KL | 10000 | ± 10 | 102 | 0.138 | 1 | 39.00 | 0.10 | 0.11 |

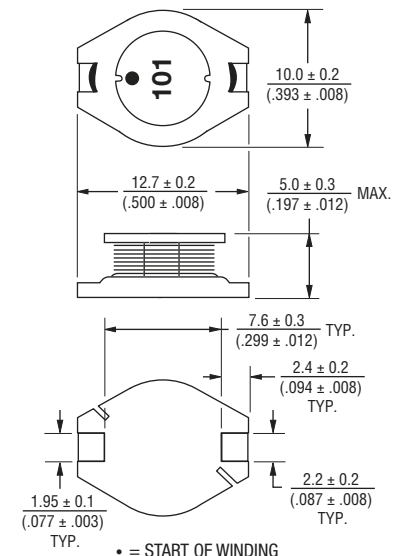
General Specifications

Test Voltage 0.1 V, 100 KHz
 Reflow Soldering .. 250 °C, 10 sec. max.
 (in compliance with JEDEC,
 J-STD-020C, Table 4-2)
 Operating Temperature
 -40 °C to +125 °C
 (Temperature rise included)
 Storage Temperature .. -40 °C to +125 °C
 Resistance to Soldering Heat
 +250 °C, 10 sec. max.
 Moisture Sensitivity Level..... 1
 ESD Classification (HBM)..... N/A

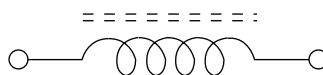
Materials

Core Ferrite DR
 Wire Enameled copper
 Base DAP
 Terminal Cu/Sn
 Rated Current
 Ind. drop 10 % typ. at Isat
 Temperature Rise
 15 °C max. at rated I rms
 Packaging 600 pcs. per reel

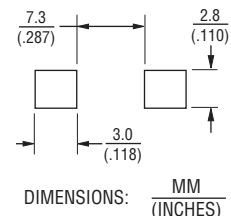
Product Dimensions



Electrical Schematic



Recommended Layout



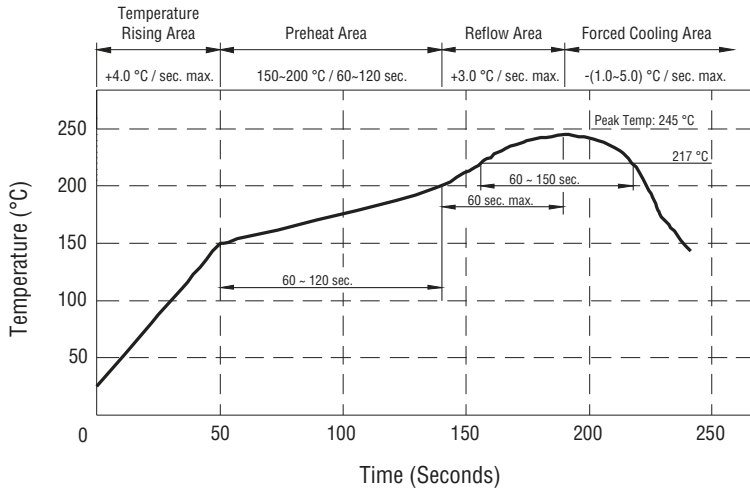
WARNING Cancer and Reproductive Harm - www.P65Warnings.ca.gov

* RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.
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SDR1005 Series - SMD Power Inductors

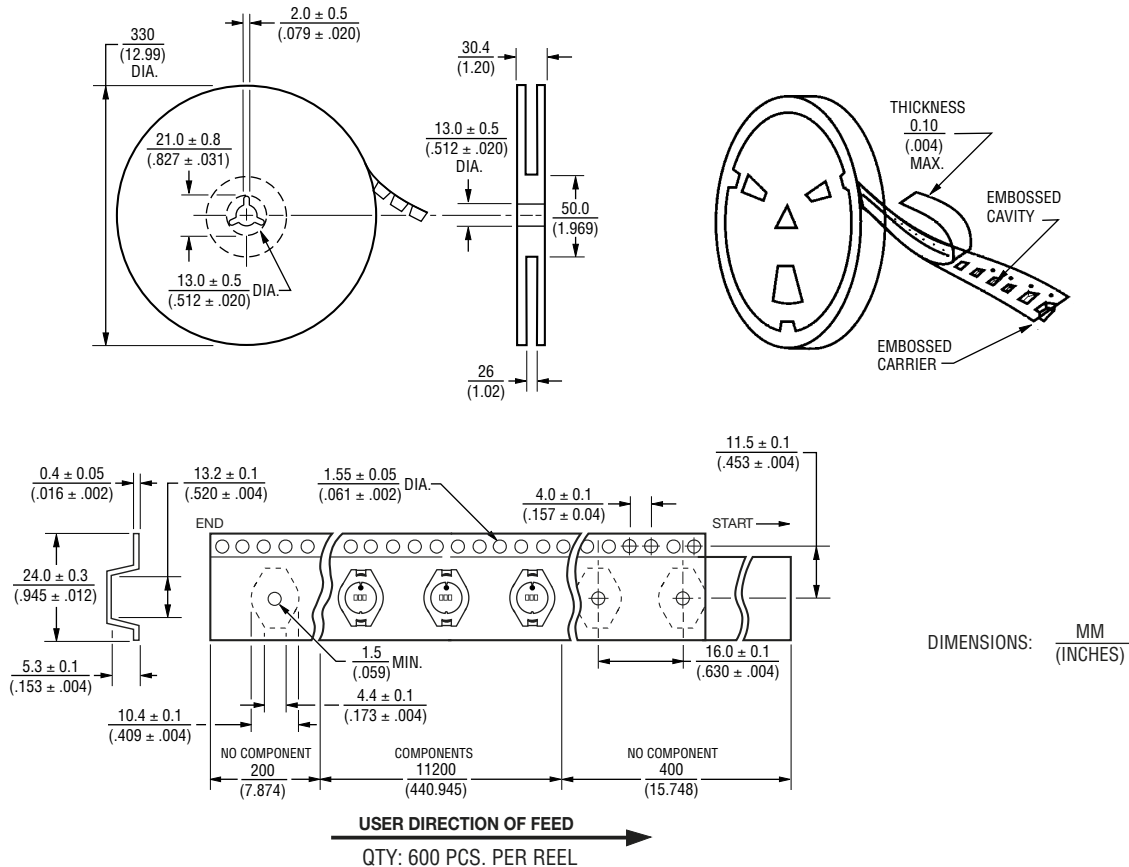
BOURNS®

Soldering Profile



Peak Temperature: 245 °C max.
 Max. Peak Temperature: -5 °C, 30 sec. max.
 Max. Time Above 217 °C: 60 ~ 150 sec. max.

Packaging Specifications



REV. 03/18

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