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We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

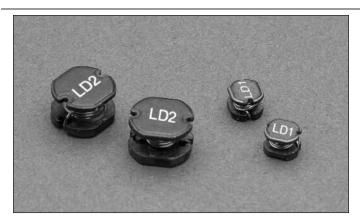








LD Series Metalized Drum Core Power Inductor



Description

- Metalized drum core design utilizes board space
- Current Range from 4.46 amps to 0.52 amps
- Inductance range from 1.0µH to 470µH
- Ferrite core material

Applications

- · Buck or boost inductor
- · Noise filtering and output filter chokes
- Computers
- Power supplies
- Test equipment instrumentation

Environmental Data

- Storage temperature: -40°C to +125°C
- Operating temperature: -40°C to +125°C (range is application specific). Temperature rise is approximately 40°C at rated rms
- Solder reflow temperature: 260°C max. for 10 seconds max.

Packaging

• Supplied in tape and reel packaging, LD1 (2,000), LD2 (1,000) parts per reel

| Part Number | Rated Inductance | OCL ⁽¹⁾ Nominal | I _{rms} ⁽²⁾ Amps | I _{sat} ⁽³⁾ Amps | DCR ⁽⁴⁾ (Ω) |
|----------------|---------------------|-------------------------------|---|---|---------------------------|
| | (μH) | | | | (Max.) |
| LD1-1R0-R | 1.0 | 1.00 | 2.66 | 4.46 | 0.0330 |
| LD1-1R4-R | 1.4 | 1.40 | 2.47 | 3.41 | 0.0380 |
| LD1-1R8-R | 1.8 | 1.80 | 2.35 | 3.05 | 0.0420 |
| LD1-2R2-R | 2.2 | 2.20 | 2.22 | 2.76 | 0.0470 |
| LD1-2R7-R | 2.7 | 2.70 | 2.11 | 2.52 | 0.0520 |
| LD1-3R3-R | 3.3 | 3.30 | 2.00 | 2.32 | 0.0580 |
| LD1-3R9-R | 3.9 | 3.90 | 1.75 | 2.14 | 0.0760 |
| LD1-4R7-R | 4.7 | 4.70 | 1.57 | 2.00 | 0.0940 |
| LD1-5R6-R | 5.6 | 5.60 | 1.51 | 1.75 | 0.1010 |
| LD1-6R8-R | 6.8 | 6.80 | 1.41 | 1.56 | 0.1170 |
| LD1-8R2-R | 8.2 | 8.20 | 1.32 | 1.41 | 0.1320 |
| LD1-100-R | 10 | 10.0 | 1.13 | 1.28 | 0.1820 |
| LD1-120-R | 12 | 12.0 | 1.05 | 1.18 | 0.2100 |
| LD1-150-R | 15 | 15.0 | 0.99 | 1.05 | 0.2350 |
| LD1-180-R | 18 | 18.0 | 0.83 | 0.98 | 0.3380 |
| LD1-220-R | 22 | 22.0 | 0.78 | 0.89 | 0.3780 |
| LD1-270-R | 27 | 27.0 | 0.67 | 0.87 | 0.5220 |
| LD1-330-R | 33 | 33.0 | 0.66 | 0.75 | 0.5400 |
| LD1-390-R | 39 | 39.0 | 0.63 | 0.68 | 0.5870 |
| LD1-470-R | 47 | 47.0 | 0.52 | 0.61 | 0.8440 |
| LD1-560-R | 56 | 56.0 | 0.50 | 0.57 | 0.9370 |
| LD1-680-R | 68 | 68.0 | 0.46 | 0.52 | 1.12 |

- 10 Open Circuit Inductance Test Parameters: 100kHz, 0.25V_{rms}, 0.0Adc +/-20% except for LD1-330-R to LD1-331-R and LD2-470-R to LD2-471-R which is +/-10%
- 2) RMS current for an approximate ΔT of 40°C. It is recommended that the temperature of the
- part not exceed 125°C

 3) Peak current for an approximate 10% rolloff at 20°C

4) DCR limits @ 20°C
5) Part number definition: LDx-yyy-R
LDx = product code and size, -yyy = inductance value in µH,
R = decimal point. If no R is present, third character = # of zeros

-R suffix = RoHS compliant



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| Part | Rated | OCL(1) | rms ⁽²⁾ | I _{sat} ® | DCR ⁽⁴⁾ |
|-----------|------------|---------|--------------------|--------------------|--------------------|
| Number | Inductance | Nominal | Amps | Amps | (Ω) |
| | (μΗ) | | | | (Max.) |
| LD1-820-R | 82 | 82 | 0.43 | 0.50 | 1.28 |
| LD1-101-R | 100 | 100 | 0.36 | 0.45 | 1.72 |
| LD1-151-R | 150 | 150 | 0.29 | 0.40 | 2.68 |
| LD1-221-R | 220 | 220 | 0.26 | 0.33 | 3.42 |
| LD1-331-R | 330 | 330 | 0.22 | 0.30 | 4.70 |
| LD2-100-R | 10 | 10.0 | 3.83 | 3.45 | 0.0700 |
| LD2-120-R | 12 | 12.0 | 3.57 | 3.20 | 0.0800 |
| LD2-150-R | 15 | 15.0 | 3.38 | 2.85 | 0.0900 |
| LD2-180-R | 18 | 18.0 | 3.19 | 2.60 | 0.1000 |
| LD2-220-R | 22 | 22.0 | 3.13 | 2.45 | 0.1100 |
| LD2-270-R | 27 | 27.0 | 2.81 | 2.10 | 0.1200 |
| LD2-330-R | 33 | 33.0 | 2.70 | 2.01 | 0.1300 |
| LD2-390-R | 39 | 39.0 | 2.42 | 1.85 | 0.1600 |
| LD2-470-R | 47 | 47.0 | 2.25 | 1.64 | 0.1800 |
| LD2-560-R | 56 | 56.0 | 1.96 | 1.50 | 0.2400 |
| LD2-680-R | 68 | 68.0 | 1.88 | 1.35 | 0.2800 |
| LD2-820-R | 82 | 82 | 1.63 | 1.28 | 0.3700 |
| LD2-101-R | 100 | 100 | 1.53 | 1.15 | 0.4300 |
| LD2-121-R | 120 | 120 | 1.43 | 1.09 | 0.4700 |
| LD2-151-R | 150 | 150 | 1.23 | 0.95 | 0.6400 |
| LD2-181-R | 180 | 180 | 1.15 | 0.87 | 0.7100 |
| LD2-221-R | 220 | 220 | 1.00 | 0.79 | 0.9600 |
| LD2-271-R | 270 | 270 | 0.94 | 0.73 | 1.11 |
| LD2-331-R | 330 | 330 | 0.83 | 0.64 | 1.26 |
| LD2-391-R | 390 | 390 | 0.78 | 0.58 | 1.77 |
| LD2-471-R | 470 | 470 | 0.74 | 0.55 | 1.96 |

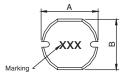
4) DCR limits @ 20°C

5) Part number definition: LDx-yyy-R

 $\begin{array}{l} LDx = product\ code\ and\ size, -yyy = inductance\ value\ in\ \mu H, \\ R = decimal\ point.\ If\ no\ R\ is\ present,\ third\ character = \#\ of\ zeros \\ -R\ suffix = RoHS\ compliant \end{array}$

Dimensions - mm

Top View





Front View



Recommended Pad Layout





Marking:

LD1: xxx=inductance value

per family chart LD2: "C" logo

xxx=inductance value

| Dimensions | Α | В | С | G | Н | - 1 |
|------------|--------|--------|--------|-----|-----|------|
| | +/-0.3 | +/-0.3 | +/-0.3 | ref | ref | ref |
| LD1 | 4.5 | 4.0 | 3.2 | 1.5 | 4.5 | 1.75 |
| LD2 | 7.8 | 7.0 | 5.0 | 2.0 | 7.5 | 3.0 |

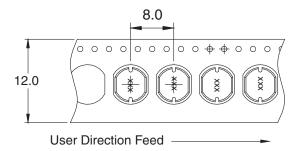
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Notes:
1) Open Circuit Inductance Test Parameters: 100kHz, 0.25V_{rms}, 0.0Adc
+/-20% except for LD1-330-R to LD1-331-R and LD2-470-R to LD2-471-R which is +/-10%
2) RMS current for an approximate ΔT of 40°C. It is recommended that the temperature of the part not exceed 125°C
3) Peak current for an approximate 10% rolloff at 20°C

Packaging Information

LD1 Series

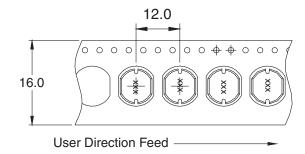
Supplied in tape and reel packaging, 2000 parts per reel, 13" diameter reel.





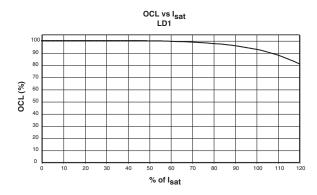
LD2 Series

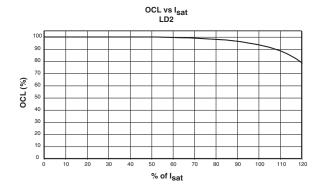
Supplied in tape and reel packaging, 1000 parts per reel, 13" diameter reel.





Inductance Characteristics





North America

Cooper Bussmann 1225 Broken Sound Parkway NW Suite F Boca Raton, FL 33487-3533 Tel: 1-561-998-4100 Fax: 1-561-241-6640

Fax: 1-561-241-6640 Toll Free: 1-888-414-2645 Cooper Bussmann P.O. Box 14460 St. Louis, MO 63178-4460 Tel: 1-636-394-2877 Fax: 1-636-527-1607

Europe

Cooper Bussmann
Cooper (UK) Limited
Burton-on-the-Wolds
Leicestershire • LE12 5TH UK
Tel: +44 (0) 1509 882 737
Fax: +44 (0) 1509 882 786

Cooper Bussmann Avda. Santa Eulalia, 290 08223 Terrassa, (Barcelona), Spain

Tel: +34 937 362 812 +34 937 362 813 Fax: +34 937 362 719

Asia Pacific

Cooper Bussmann 1 Jalan Kilang Timor #06-01 Pacific Tech Centre Singapore 159303 Tel: +65 278 6151 Fax: +65 270 4160

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