

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 1.0 μ H to 470 μ H
- Ferrite core material

Applications

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

RoHS
2002/95/EC

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 current.
- 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 (μ H)	OCL ⁽¹⁾ Nominal	I _{rms} ⁽²⁾ Amps	I _{sat} ⁽³⁾ Amps	DCR ⁽⁴⁾ (Ω) (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

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

4) DCR limits @ 20°C

5) Part number definition: LDx-yyy-R
LDx = product code and size, -yyy = inductance value in μ H,
R = decimal point. If no R is present, third character = # of zeros
-R suffix = RoHS compliant

Part Number	Rated Inductance (μH)	OCL ⁽¹⁾ Nominal	I _{rms} ⁽²⁾ Amps	I _{sat} ⁽³⁾ Amps	DCR ⁽⁴⁾ (Ω) (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

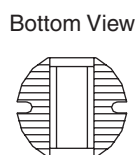
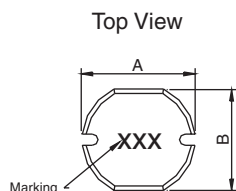
Notes:

- 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

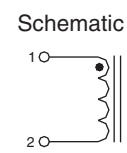
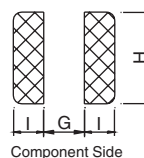
4) DCR limits @ 20°C

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R = decimal point. If no R is present, third character = # of zeros
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Dimensions - mm



Recommended Pad Layout



Marking:

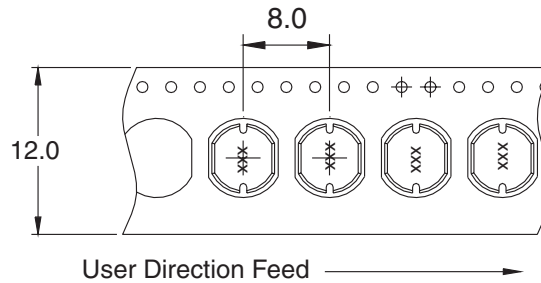
LD1: xxx=inductance value
per family chart
LD2: "C" logo
xxx=inductance value

Dimensions	A +/-0.3	B +/-0.3	C +/-0.3	G ref	H ref	I 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

Packaging Information

LD1 Series

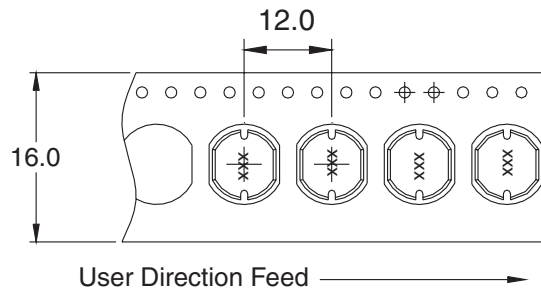
Supplied in tape and reel packaging,
2000 parts per reel, 13" diameter reel.




ACTUAL SIZE
LD1

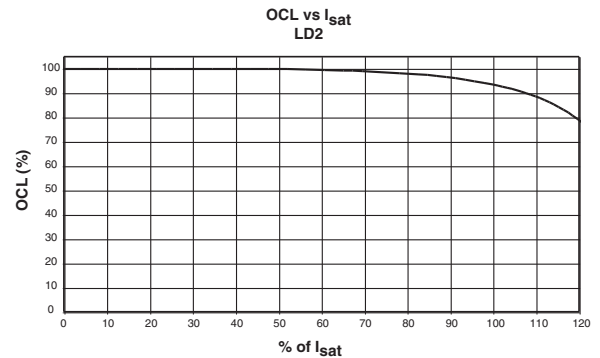
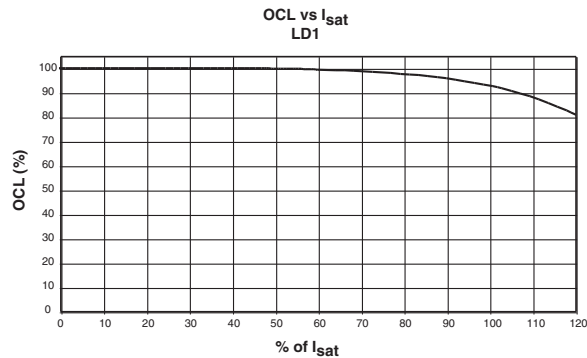
LD2 Series

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




ACTUAL SIZE
LD2

Inductance Characteristics



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