



# RL-7500-0

## RL-7500-1, RL-7500-2, RL-7500-3, RL-7500-4 SHIELDED HIGH CURRENT SMD POWER INDUCTORS

### DESCRIPTION

- Shielded SMD Power Inductors
- High Current

### ENVIRONMENTAL DATA

- Storage temperature range: -55°C to +130°C
- Operating temperature range: -40°C to +130°C

### PACKAGING INFORMATION

- Packaging information: pg. 504

### FEATURES & APPLICATIONS

- Magnetic shielded surface mount inductor with high current rating
- Low resistance to keep power loss at a minimum
- Excellent for power line DC-DC conversion applications used in hard disk, notebook computers and other electronic equipment

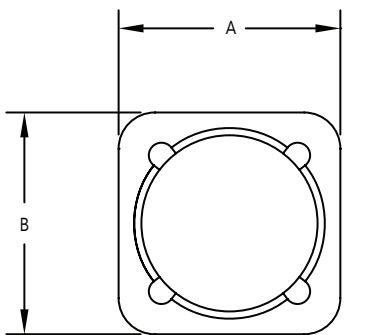
Verify operation with sample in actual circuit. Order samples at [www.rencousa.com](http://www.rencousa.com).

### MECHANICAL DIMENSIONS

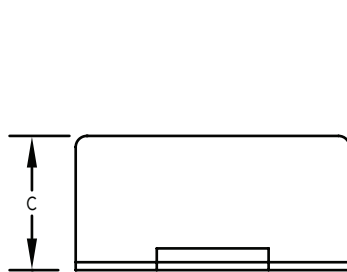
U.S. Standard (mm)

PART NUMBER	A (MAX.)	B (MAX.)	C (MAX.)	D (REF.)	E (REF.)	F (REF.)	PART WEIGHT
RL-7500-0	0.49 (12.80)	0.49 (12.80)	0.12 (3.90)	0.28 (7.00)	0.11 (2.80)	0.21 (5.40)	3.0g (0.11oz)
RL-7500-1	0.49 (12.80)	0.49 (12.80)	0.18 (4.60)	0.28 (7.00)	0.11 (2.80)	0.21 (5.40)	3.0g (0.11oz)
RL-7500-2	0.49 (12.80)	0.49 (12.80)	0.24 (6.00)	0.28 (7.00)	0.11 (2.80)	0.21 (5.40)	3.0g (0.11oz)
RL-7500-3	0.49 (12.80)	0.49 (12.80)	0.32 (8.00)	0.28 (7.00)	0.11 (2.80)	0.21 (5.40)	4.0g (0.14oz)
RL-7500-4	0.49 (12.80)	0.49 (12.80)	0.39 (10.00)	0.28 (7.00)	0.11 (2.80)	0.21 (5.40)	5.49g (0.19oz)

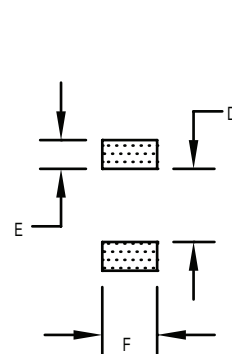
TOP VIEW



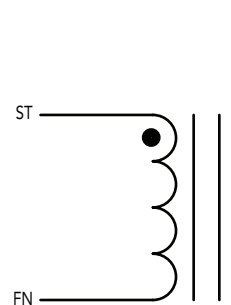
SIDE VIEW



RECOMMENDED LAND PATTERN



SCHEMATIC



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# RL-7500-0, RL-7500-1, RL-7500-2

Renco Part No. RL-7500-0	Inductance ( $\mu$ H)	DCR Max. (Ohms)	Isat (A)	Irms (A)
RL-7500-0-1R5M	1.5 $\pm$ 20%	0.013	7.80	7.80
RL-7500-0-2R2M	2.2 $\pm$ 20%	0.015	6.80	6.80
RL-7500-0-3R9M	3.9 $\pm$ 20%	0.026	5.50	5.50
RL-7500-0-5R6M	5.6 $\pm$ 20%	0.032	4.80	4.80
RL-7500-0-8R2M	8.2 $\pm$ 20%	0.045	4.10	4.10
RL-7500-0-100M	10.0 $\pm$ 20%	0.050	3.90	3.90
RL-7500-0-120M	12.0 $\pm$ 20%	0.060	3.50	3.50
RL-7500-0-150M	15.0 $\pm$ 20%	0.080	3.00	3.00
RL-7500-0-180M	18.0 $\pm$ 20%	0.100	2.70	2.70
RL-7500-0-220M	22.0 $\pm$ 20%	0.110	2.50	2.50
RL-7500-0-270M	27.0 $\pm$ 20%	0.130	2.20	2.20
RL-7500-0-330M	33.0 $\pm$ 20%	0.160	2.10	2.10
RL-7500-0-390M	39.0 $\pm$ 20%	0.180	2.00	2.00
RL-7500-0-470M	47.0 $\pm$ 20%	0.220	1.80	1.80
RL-7500-0-560M	56.0 $\pm$ 20%	0.260	1.60	1.60
RL-7500-0-680M	68.0 $\pm$ 20%	0.310	1.50	1.50
RL-7500-0-820M	82.0 $\pm$ 20%	0.360	1.40	1.40
RL-7500-0-101M	100.0 $\pm$ 20%	0.400	1.30	1.30
RL-7500-0-121M	120.0 $\pm$ 20%	0.530	1.10	1.10
RL-7500-0-151M	150.0 $\pm$ 20%	0.610	1.00	1.00
RL-7500-0-181M	180.0 $\pm$ 20%	0.800	0.90	0.90
RL-7500-0-221M	220.0 $\pm$ 20%	0.970	0.85	0.85
RL-7500-0-271M	270.0 $\pm$ 20%	1.200	0.75	0.75
RL-7500-0-331M	330.0 $\pm$ 20%	1.350	0.70	0.70

Renco Part No. RL-7500-1	Inductance ( $\mu$ H)	DCR Max. (Ohms)	Isat (A)	Irms (A)
RL-7500-1-3R3M	3.3 $\pm$ 20%	0.015	6.50	6.50
RL-7500-1-4R7M	4.7 $\pm$ 20%	0.018	5.70	5.70
RL-7500-1-6R8M	6.8 $\pm$ 20%	0.023	4.90	4.90
RL-7500-1-100M	10.0 $\pm$ 20%	0.028	4.50	4.50
RL-7500-1-120M	12.0 $\pm$ 20%	0.038	4.00	4.00
RL-7500-1-150M	15.0 $\pm$ 20%	0.052	3.20	3.20
RL-7500-1-180M	18.0 $\pm$ 20%	0.060	3.10	3.10
RL-7500-1-220M	22.0 $\pm$ 20%	0.070	2.90	2.90
RL-7500-1-270M	27.0 $\pm$ 20%	0.080	2.80	2.80
RL-7500-1-330M	33.0 $\pm$ 20%	0.097	2.70	2.70
RL-7500-1-390M	39.0 $\pm$ 20%	0.132	2.10	2.10
RL-7500-1-470M	47.0 $\pm$ 20%	0.150	1.90	1.90
RL-7500-1-560M	56.0 $\pm$ 20%	0.190	1.80	1.80
RL-7500-1-680M	68.0 $\pm$ 20%	0.220	1.50	1.50
RL-7500-1-820M	82.0 $\pm$ 20%	0.260	1.30	1.30
RL-7500-1-101M	100.0 $\pm$ 20%	0.308	1.20	1.20
RL-7500-1-121M	120.0 $\pm$ 20%	0.380	1.10	1.10
RL-7500-1-151M	150.0 $\pm$ 20%	0.520	0.95	0.95
RL-7500-1-181M	180.0 $\pm$ 20%	0.600	0.85	0.85
RL-7500-1-221M	220.0 $\pm$ 20%	0.700	0.80	0.80
RL-7500-1-271M	270.0 $\pm$ 20%	0.860	0.60	0.60
RL-7500-1-331M	330.0 $\pm$ 20%	0.980	0.50	0.50

Renco Part No. RL-7500-2	Inductance ( $\mu$ H)	DCR Max. (Ohms)	Isat (A)	Irms (A)
RL-7500-2-1R5Y	1.5 $\pm$ 25%	0.012	8.00	8.00
RL-7500-2-2R2Y	2.2 $\pm$ 25%	0.014	7.00	7.00
RL-7500-2-3R1Y	3.1 $\pm$ 25%	0.017	6.00	6.00
RL-7500-2-4R4Y	4.4 $\pm$ 25%	0.020	5.00	5.00
RL-7500-2-5R2Y	5.2 $\pm$ 25%	0.021	4.40	4.40
RL-7500-2-7R5Y	7.5 $\pm$ 25%	0.024	4.20	4.20
RL-7500-2-100M	10.0 $\pm$ 20%	0.025	4.00	4.00
RL-7500-2-120M	12.0 $\pm$ 20%	0.027	3.50	3.50
RL-7500-2-150M	15.0 $\pm$ 20%	0.030	3.30	3.30
RL-7500-2-180M	18.0 $\pm$ 20%	0.034	3.00	3.00
RL-7500-2-220M	22.0 $\pm$ 20%	0.036	2.80	2.80
RL-7500-2-270M	27.0 $\pm$ 20%	0.051	2.30	2.30
RL-7500-2-330M	33.0 $\pm$ 20%	0.057	2.10	2.10
RL-7500-2-390M	39.0 $\pm$ 20%	0.068	2.00	2.00
RL-7500-2-470M	47.0 $\pm$ 20%	0.075	1.80	1.80
RL-7500-2-560M	56.0 $\pm$ 20%	0.110	1.70	1.70
RL-7500-2-680M	68.0 $\pm$ 20%	0.120	1.50	1.50
RL-7500-2-820M	82.0 $\pm$ 20%	0.140	1.40	1.40
RL-7500-2-101M	100.0 $\pm$ 20%	0.160	1.30	1.30
RL-7500-2-121M	120.0 $\pm$ 20%	0.170	1.10	1.10
RL-7500-2-151M	150.0 $\pm$ 20%	0.230	1.00	1.00

Renco Part No. RL-7500-2	Inductance ( $\mu$ H)	DCR Max. (Ohms)	Isat (A)	Irms (A)
RL-7500-2-181M	180.0 $\pm$ 20%	0.290	0.90	0.90
RL-7500-2-221M	220.0 $\pm$ 20%	0.400	0.80	0.80
RL-7500-2-271M	270.0 $\pm$ 20%	0.460	0.75	0.75
RL-7500-2-331M	330.0 $\pm$ 20%	0.510	0.68	0.68
RL-7500-2-391M	390.0 $\pm$ 20%	0.690	0.65	0.65
RL-7500-2-471M	470.0 $\pm$ 20%	0.770	0.58	0.58
RL-7500-2-561M	560.0 $\pm$ 20%	0.860	0.54	0.54
RL-7500-2-681M	680.0 $\pm$ 20%	1.200	0.48	0.48
RL-7500-2-821M	820.0 $\pm$ 20%	1.340	0.43	0.43
RL-7500-2-102M	1000.0 $\pm$ 20%	1.530	0.40	0.40

#### NOTES:

1. Isat - DC CURRENT THAT WILL CAUSE INDUCTANCE TO DROP BY 20%
2. Irms - CURRENT THAT CAUSES THE TEMPERATURE TO RISE APPROX. 40°C ABOVE AMBIENT OF 25°C
3. ELECTRICAL SPECIFICATIONS MEASURED AT 25°C
4. INDUCTANCE TESTED AT 100 kHz, 1.0 Vrms



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# RL-7500-3, RL-7500-4

Renco Part No. RL-7500-3	Inductance ( $\mu$ H)	DCR Max. (Ohms)	Isat (A)	Irms (A)
RL-7500-3-1R2Y	1.2 $\pm$ 30%	0.0070	9.80	9.80
RL-7500-3-2R7Y	2.7 $\pm$ 30%	0.0115	8.00	8.00
RL-7500-3-3R9Y	3.9 $\pm$ 30%	0.0135	7.50	7.50
RL-7500-3-4R7Y	4.7 $\pm$ 30%	0.0158	6.80	6.80
RL-7500-3-5R6Y	5.6 $\pm$ 30%	0.0176	6.60	6.60
RL-7500-3-7R6Y	7.6 $\pm$ 30%	0.0200	5.90	5.90
RL-7500-3-100M	10.0 $\pm$ 20%	0.0216	5.40	5.40
RL-7500-3-120M	12.0 $\pm$ 20%	0.0243	4.90	4.90
RL-7500-3-150M	15.0 $\pm$ 20%	0.0270	4.50	4.50
RL-7500-3-180M	18.0 $\pm$ 20%	0.0392	3.90	3.90
RL-7500-3-220M	22.0 $\pm$ 20%	0.0432	3.60	3.60
RL-7500-3-270M	27.0 $\pm$ 20%	0.0459	3.40	3.40
RL-7500-3-330M	33.0 $\pm$ 20%	0.0648	3.00	3.00
RL-7500-3-390M	39.0 $\pm$ 20%	0.0729	2.75	2.75
RL-7500-3-470M	47.0 $\pm$ 20%	0.1000	2.50	2.50
RL-7500-3-560L	56.0 $\pm$ 15%	0.1100	2.35	2.35
RL-7500-3-680L	68.0 $\pm$ 15%	0.1400	2.10	2.10
RL-7500-3-820L	82.0 $\pm$ 15%	0.1600	1.95	1.95
RL-7500-3-101L	100.0 $\pm$ 15%	0.2200	1.70	1.70
RL-7500-3-121L	120.0 $\pm$ 15%	0.2500	1.60	1.60
RL-7500-3-151L	150.0 $\pm$ 15%	0.2800	1.42	1.42
RL-7500-3-181K	180.0 $\pm$ 10%	0.3500	1.30	1.30
RL-7500-3-221K	220.0 $\pm$ 10%	0.3900	1.16	1.16
RL-7500-3-271K	270.0 $\pm$ 10%	0.5600	1.06	1.06
RL-7500-3-331K	330.0 $\pm$ 10%	0.6400	0.95	0.95
RL-7500-3-391K	390.0 $\pm$ 10%	0.7000	0.88	0.88
RL-7500-3-471K	470.0 $\pm$ 10%	0.9800	0.79	0.79
RL-7500-3-561K	560.0 $\pm$ 10%	1.0700	0.73	0.73
RL-7500-3-681K	680.0 $\pm$ 10%	1.4600	0.67	0.67
RL-7500-3-821K	820.0 $\pm$ 10%	1.6400	0.60	0.60
RL-7500-3-102K	1000.0 $\pm$ 10%	1.8200	0.55	0.55

Renco Part No. RL-7500-4	Inductance ( $\mu$ H)	DCR Max. (Ohms)	Isat (A)	Irms (A)
RL-7500-4-1R0Y	1.0 $\pm$ 30%	0.0060	25.00	11.30
RL-7500-4-2R2Y	2.2 $\pm$ 30%	0.0075	20.00	10.20
RL-7500-4-3R5Y	3.5 $\pm$ 30%	0.0085	17.00	9.60
RL-7500-4-4R7Y	4.7 $\pm$ 30%	0.0090	15.00	9.10
RL-7500-4-5R6Y	5.6 $\pm$ 30%	0.0115	13.50	8.30
RL-7500-4-6R8Y	6.8 $\pm$ 30%	0.0125	12.80	7.80
RL-7500-4-100M	10.0 $\pm$ 20%	0.0160	10.50	6.90
RL-7500-4-120M	12.0 $\pm$ 20%	0.0185	9.50	6.20
RL-7500-4-150M	15.0 $\pm$ 20%	0.0215	8.50	5.90
RL-7500-4-220M	22.0 $\pm$ 20%	0.0285	7.00	5.10
RL-7500-4-270M	27.0 $\pm$ 20%	0.0325	6.20	4.80
RL-7500-4-330M	33.0 $\pm$ 20%	0.0410	5.70	4.30
RL-7500-4-390M	39.0 $\pm$ 20%	0.0490	5.10	3.90
RL-7500-4-470M	47.0 $\pm$ 20%	0.0530	4.50	3.80
RL-7500-4-560M	56.0 $\pm$ 20%	0.0650	4.10	3.40
RL-7500-4-680M	68.0 $\pm$ 20%	0.0730	3.80	3.20
RL-7500-4-820M	82.0 $\pm$ 20%	0.0900	3.60	2.80
RL-7500-4-101M	100.0 $\pm$ 20%	0.1180	3.30	2.50
RL-7500-4-121M	120.0 $\pm$ 20%	0.1650	3.00	2.20
RL-7500-4-151M	150.0 $\pm$ 20%	0.1820	2.70	2.00
RL-7500-4-181M	180.0 $\pm$ 20%	0.2200	2.40	1.80
RL-7500-4-221M	220.0 $\pm$ 20%	0.2600	2.20	1.70
RL-7500-4-271M	270.0 $\pm$ 20%	0.3100	2.00	1.55
RL-7500-4-331M	330.0 $\pm$ 20%	0.3400	1.80	1.45
RL-7500-4-391M	390.0 $\pm$ 20%	0.4800	1.70	1.30
RL-7500-4-471M	470.0 $\pm$ 20%	0.5100	1.60	1.20
RL-7500-4-561M	560.0 $\pm$ 20%	0.6000	1.50	1.10
RL-7500-4-681M	680.0 $\pm$ 20%	0.7050	1.30	1.00
RL-7500-4-821M	820.0 $\pm$ 20%	0.8750	1.20	0.90
RL-7500-4-102M	1000.0 $\pm$ 20%	0.9500	1.10	0.85
RL-7500-4-152M	1500.0 $\pm$ 20%	1.5000	0.90	0.70

**NOTES:**

1. Isat - DC CURRENT THAT WILL CAUSE INDUCTANCE TO DROP BY 20% FOR RL-7500-3 AND 10% FOR RL-7500-4
2. Irms - CURRENT THAT CAUSES THE TEMPERATURE TO RISE APPROX. 40°C ABOVE AMBIENT OF 25°C
3. ELECTRICAL SPECIFICATIONS MEASURED AT 25°C
4. INDUCTANCE TESTED AT 100 kHz, 1.0 Vrms



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