

# RL-8100-1

RL-8100-2, RL-8100-3, RL-8100-4  
RL-8100-5, RL-8100-6

## SHIELDED SMD POWER INDUCTORS

### DESCRIPTION

- Shielded SMD Power Inductor

### ENVIRONMENTAL DATA

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

### PACKAGING INFORMATION

- Packaging information: pg. 496

### FEATURES & APPLICATIONS

- Excellent solderability and high heat resistance
- Excellent current rating
- Magnetically shielded construction
- Ideal for use in laptop computers, hard disks and other electronic equipment

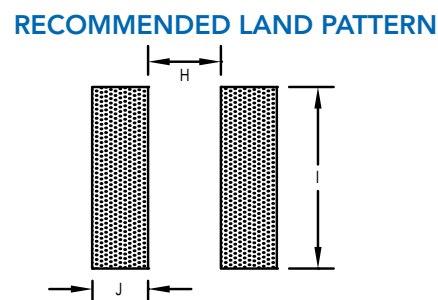
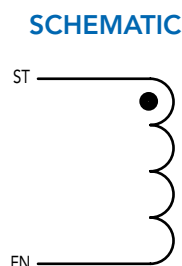
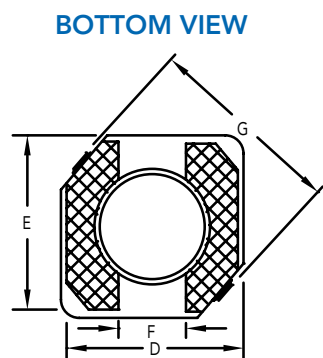
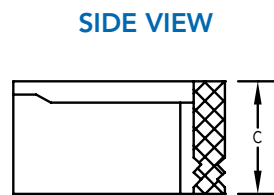
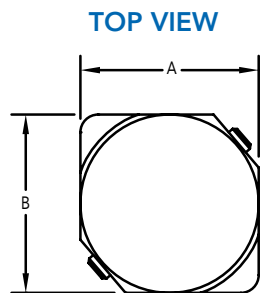
Verify operation with sample in actual circuit. Order samples at [www.rencousa.com](http://www.rencousa.com).

### MECHANICAL DIMENSIONS

U.S. Standard (mm)

PART NUMBER	A (MAX.)	B (MAX.)	C (MAX.)	D (REF.)	E (REF.)	F (REF.)	G (MAX.)
RL-8100-1	0.20 (5.00)	0.20 (5.00)	0.08 (2.00)	0.18 (4.50)	0.18 (4.50)	0.06 (1.50)	0.27 (6.90)
RL-8100-2	0.20 (5.00)	0.20 (5.00)	0.12 (3.00)	0.18 (4.50)	0.18 (4.50)	0.06 (1.50)	0.27 (6.90)
RL-8100-3	0.24 (6.00)	0.24 (6.00)	0.08 (2.00)	0.22 (5.50)	0.22 (5.50)	0.08 (2.00)	0.32 (8.20)
RL-8100-4	0.24 (6.00)	0.24 (6.00)	0.12 (3.00)	0.22 (5.50)	0.22 (5.50)	0.08 (2.00)	0.32 (8.20)
RL-8100-5	0.28 (7.00)	0.28 (7.00)	0.12 (3.00)	0.26 (6.50)	0.26 (6.50)	0.08 (2.00)	0.37 (9.50)
RL-8100-6	0.28 (7.00)	0.28 (7.00)	0.16 (4.00)	0.26 (6.50)	0.26 (6.50)	0.08 (2.00)	0.37 (9.50)

H (REF.)	I (REF.)	J (REF.)
0.06 (1.50)	0.21 (5.30)	0.08 (2.00)
0.06 (1.50)	0.21 (5.30)	0.08 (2.00)
0.08 (2.00)	0.25 (6.30)	0.09 (2.15)
0.08 (2.00)	0.25 (6.30)	0.09 (2.15)
0.08 (2.00)	0.29 (7.30)	0.10 (2.65)
0.08 (2.00)	0.29 (7.30)	0.10 (2.65)



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# RL-8100-1

Renco Part No. RL-8100-1	Inductance ( $\mu$ H)	DCR Max. (Ohms)	Isat (A)	Irms (A)
RL-8100-1-1R0Y	1.0 $\pm$ 30%	0.045	1.72	1.72
RL-8100-1-2R2Y	2.2 $\pm$ 30%	0.075	1.32	1.32
RL-8100-1-2R7Y	2.7 $\pm$ 30%	0.105	1.28	1.28
RL-8100-1-3R3Y	3.3 $\pm$ 30%	0.110	1.04	1.04
RL-8100-1-3R9Y	3.9 $\pm$ 30%	0.155	0.88	0.88
RL-8100-1-4R7Y	4.7 $\pm$ 30%	0.162	0.84	0.84
RL-8100-1-5R6Y	5.6 $\pm$ 30%	0.170	0.80	0.80
RL-8100-1-6R8Y	6.8 $\pm$ 30%	0.180	0.76	0.76
RL-8100-1-8R2Y	8.2 $\pm$ 30%	0.190	0.68	0.68
RL-8100-1-100Y	10.0 $\pm$ 30%	0.200	0.61	0.61
RL-8100-1-120Y	12.0 $\pm$ 30%	0.210	0.56	0.56
RL-8100-1-150Y	15.0 $\pm$ 30%	0.240	0.50	0.50
RL-8100-1-180Y	18.0 $\pm$ 30%	0.338	0.48	0.48
RL-8100-1-220Y	22.0 $\pm$ 30%	0.397	0.41	0.41
RL-8100-1-270Y	27.0 $\pm$ 30%	0.441	0.35	0.35
RL-8100-1-330Y	33.0 $\pm$ 30%	0.694	0.32	0.32
RL-8100-1-390Y	39.0 $\pm$ 30%	0.709	0.30	0.30

**NOTES:**

1. Irms - CURRENT THAT CAUSES THE TEMPERATURE TO RISE APPROX. 40°C ABOVE AMBIENT OF 25°C
2. Isat - DC CURRENT THAT WILL CAUSE INDUCTANCE TO DROP BY 30%
3. ELECTRICAL SPECIFICATIONS MEASURED AT 25°C
4. INDUCTANCE TESTED AT 100 kHz, 0.5 Vrms

PART NUMBER	PART WEIGHT
RL-8100-1;3	0.3g (0.01oz)
RL-8100-2	0.5g (0.018oz)
RL-8100-4	0.5g (0.018oz)
RL-8100-5;6	0.6g (0.02oz)



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# RL-8100-2

Renco Part No. RL-8100-2	Inductance ( $\mu$ H)	DCR Max. (Ohms)	Isat (A)	Irms (A)
RL-8100-2-1R2Y	1.2 $\pm$ 30%	0.0236	2.56	2.56
RL-8100-2-1R8Y	1.8 $\pm$ 30%	0.0275	2.20	2.20
RL-8100-2-2R2Y	2.2 $\pm$ 30%	0.0313	2.04	2.04
RL-8100-2-2R7Y	2.7 $\pm$ 30%	0.0433	1.60	1.60
RL-8100-2-3R3Y	3.3 $\pm$ 30%	0.0492	1.57	1.57
RL-8100-2-3R9Y	3.9 $\pm$ 30%	0.0648	1.44	1.44
RL-8100-2-4R7Y	4.7 $\pm$ 30%	0.0720	1.32	1.32
RL-8100-2-5R6Y	5.6 $\pm$ 30%	0.1009	1.17	1.17
RL-8100-2-6R8Y	6.8 $\pm$ 30%	0.1089	1.12	1.12
RL-8100-2-8R2Y	8.2 $\pm$ 30%	0.1175	1.04	1.04
RL-8100-2-100Y	10.0 $\pm$ 30%	0.1283	1.00	1.00
RL-8100-2-120Y	12.0 $\pm$ 30%	0.1316	0.84	0.84
RL-8100-2-150Y	15.0 $\pm$ 30%	0.1490	0.76	0.76
RL-8100-2-180Y	18.0 $\pm$ 30%	0.1660	0.72	0.72
RL-8100-2-220Y	22.0 $\pm$ 30%	0.2350	0.70	0.70
RL-8100-2-270Y	27.0 $\pm$ 30%	0.2610	0.58	0.58
RL-8100-2-330Y	33.0 $\pm$ 30%	0.3313	0.56	0.56
RL-8100-2-390Y	39.0 $\pm$ 30%	0.3837	0.50	0.50
RL-8100-2-470Y	47.0 $\pm$ 30%	0.5870	0.48	0.48
RL-8100-2-560Y	56.0 $\pm$ 30%	0.6245	0.41	0.41
RL-8100-2-680Y	68.0 $\pm$ 30%	0.6990	0.35	0.35
RL-8100-2-820Y	82.0 $\pm$ 30%	0.9148	0.32	0.32
RL-8100-2-101Y	100.0 $\pm$ 30%	1.0200	0.29	0.29
RL-8100-2-121Y	120.0 $\pm$ 30%	1.2700	0.27	0.27
RL-8100-2-151Y	150.0 $\pm$ 30%	1.3500	0.24	0.24
RL-8100-2-181Y	180.0 $\pm$ 30%	1.5400	0.22	0.22

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3. ELECTRICAL SPECIFICATIONS MEASURED AT 25°C
4. INDUCTANCE TESTED AT 100 kHz, 0.5 Vrms



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# RL-8100-3, RL-8100-4

Renco Part No. RL-8100-3	Inductance ( $\mu$ H)	DCR Max. (Ohms)	Isat (A)	Irms (A)
RL-8100-3-4R1Y	4.0 $\pm$ 30%	0.057	1.95	1.95
RL-8100-3-5R4Y	5.4 $\pm$ 30%	0.076	1.60	1.60
RL-8100-3-6R2Y	6.2 $\pm$ 30%	0.096	1.40	1.40
RL-8100-3-8R9Y	8.9 $\pm$ 30%	0.116	1.25	1.25
RL-8100-3-100Y	10.0 $\pm$ 30%	0.124	1.20	1.20
RL-8100-3-120Y	12.0 $\pm$ 30%	0.153	1.10	1.10
RL-8100-3-150Y	15.0 $\pm$ 30%	0.196	0.97	0.97
RL-8100-3-180Y	18.0 $\pm$ 30%	0.210	0.85	0.85
RL-8100-3-220Y	22.0 $\pm$ 30%	0.290	0.80	0.80
RL-8100-3-270Y	27.0 $\pm$ 30%	0.330	0.75	0.75
RL-8100-3-330Y	33.0 $\pm$ 30%	0.385	0.65	0.65
RL-8100-3-390Y	39.0 $\pm$ 30%	0.520	0.57	0.57
RL-8100-3-470Y	47.0 $\pm$ 30%	0.595	0.54	0.54
RL-8100-3-560Y	56.0 $\pm$ 30%	0.665	0.50	0.50
RL-8100-3-680Y	68.0 $\pm$ 30%	0.840	0.43	0.43
RL-8100-3-820Y	82.0 $\pm$ 30%	0.978	0.41	0.41
RL-8100-3-101Y	100.0 $\pm$ 30%	1.200	0.36	0.36

Renco Part No. RL-8100-4	Inductance ( $\mu$ H)	DCR Max. (Ohms)	Isat (A)	Irms (A)
RL-8100-4-2R5Y	2.5 $\pm$ 30%	0.018	2.60	2.60
RL-8100-4-3R0Y	3.0 $\pm$ 30%	0.024	2.40	2.40
RL-8100-4-4R2Y	4.2 $\pm$ 30%	0.031	2.20	2.20
RL-8100-4-5R3Y	5.3 $\pm$ 30%	0.038	1.90	1.90
RL-8100-4-6R2Y	6.2 $\pm$ 30%	0.045	1.80	1.80
RL-8100-4-8R2Y	8.2 $\pm$ 30%	0.053	1.60	1.60
RL-8100-4-100Y	10.0 $\pm$ 30%	0.065	1.30	1.30
RL-8100-4-120Y	12.0 $\pm$ 30%	0.076	1.20	1.20
RL-8100-4-150Y	15.0 $\pm$ 30%	0.103	1.10	1.10
RL-8100-4-180Y	18.0 $\pm$ 30%	0.110	1.00	1.00
RL-8100-4-220Y	22.0 $\pm$ 30%	0.122	0.90	0.90
RL-8100-4-270Y	27.0 $\pm$ 30%	0.175	0.85	0.85
RL-8100-4-330Y	33.0 $\pm$ 30%	0.189	0.75	0.75
RL-8100-4-390Y	39.0 $\pm$ 30%	0.212	0.70	0.70
RL-8100-4-470Y	47.0 $\pm$ 30%	0.250	0.62	0.62
RL-8100-4-560Y	56.0 $\pm$ 30%	0.305	0.58	0.58
RL-8100-4-680Y	68.0 $\pm$ 30%	0.355	0.52	0.52
RL-8100-4-820Y	82.0 $\pm$ 30%	0.463	0.46	0.46
RL-8100-4-101Y	100.0 $\pm$ 30%	0.520	0.42	0.42

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# RL-8100-5, RL-8100-6

Renco Part No. RL-8100-5	Inductance ( $\mu$ H)	DCR Max. (Ohms)	Isat (A)	Irms (A)
RL-8100-5-3R0Y	3.0 $\pm$ 30%	0.024	3.00	3.00
RL-8100-5-3R9Y	3.9 $\pm$ 30%	0.027	2.60	2.60
RL-8100-5-5R2Y	5.2 $\pm$ 30%	0.031	2.40	2.40
RL-8100-5-6R0Y	6.0 $\pm$ 30%	0.035	2.25	2.25
RL-8100-5-7R3Y	7.3 $\pm$ 30%	0.054	2.10	2.10
RL-8100-5-8R6Y	8.6 $\pm$ 30%	0.058	1.85	1.85
RL-8100-5-100Y	10.0 $\pm$ 30%	0.065	1.70	1.70
RL-8100-5-120Y	12.0 $\pm$ 30%	0.070	1.55	1.55
RL-8100-5-150Y	15.0 $\pm$ 30%	0.084	1.40	1.40
RL-8100-5-180Y	18.0 $\pm$ 30%	0.095	1.32	1.32
RL-8100-5-220Y	22.0 $\pm$ 30%	0.128	1.20	1.20
RL-8100-5-270Y	27.0 $\pm$ 30%	0.142	1.05	1.05
RL-8100-5-330Y	33.0 $\pm$ 30%	0.165	0.97	0.97
RL-8100-5-390Y	39.0 $\pm$ 30%	0.210	0.86	0.86
RL-8100-5-470Y	47.0 $\pm$ 30%	0.238	0.80	0.80
RL-8100-5-560Y	56.0 $\pm$ 30%	0.277	0.73	0.73
RL-8100-5-680Y	68.0 $\pm$ 30%	0.304	0.65	0.65
RL-8100-5-820Y	82.0 $\pm$ 30%	0.390	0.60	0.60
RL-8100-5-101Y	100.0 $\pm$ 30%	0.535	0.54	0.54

Renco Part No. RL-8100-6	Inductance ( $\mu$ H)	DCR Max. (Ohms)	Isat (A)	Irms (A)
RL-8100-6-3R3Y	3.3 $\pm$ 30%	0.024	3.50	3.50
RL-8100-6-5R0Y	5.0 $\pm$ 30%	0.031	2.90	2.90
RL-8100-6-6R2Y	6.2 $\pm$ 30%	0.035	2.50	2.50
RL-8100-6-7R4Y	7.4 $\pm$ 30%	0.054	2.30	2.30
RL-8100-6-8R7Y	8.7 $\pm$ 30%	0.058	2.20	2.20
RL-8100-6-100Y	10.0 $\pm$ 30%	0.065	2.00	2.00
RL-8100-6-120Y	12.0 $\pm$ 30%	0.070	1.70	1.70
RL-8100-6-150Y	15.0 $\pm$ 30%	0.084	1.60	1.60
RL-8100-6-180Y	18.0 $\pm$ 30%	0.095	1.50	1.50
RL-8100-6-220Y	22.0 $\pm$ 30%	0.128	1.30	1.30
RL-8100-6-270Y	27.0 $\pm$ 30%	0.142	1.20	1.20
RL-8100-6-330Y	33.0 $\pm$ 30%	0.165	1.10	1.10
RL-8100-6-390Y	39.0 $\pm$ 30%	0.210	1.00	1.00
RL-8100-6-470Y	47.0 $\pm$ 30%	0.238	0.95	0.95
RL-8100-6-560Y	56.0 $\pm$ 30%	0.277	0.85	0.85
RL-8100-6-680Y	68.0 $\pm$ 30%	0.304	0.75	0.75
RL-8100-6-820Y	82.0 $\pm$ 30%	0.390	0.70	0.70
RL-8100-6-101Y	100.0 $\pm$ 30%	0.535	0.65	0.65

**NOTES:**

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