



# RL-8000-1

## RL-8000-2, RL-8000-3 SMD POWER INDUCTORS

### DESCRIPTION

- 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. 491

### FEATURES & APPLICATIONS

- 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

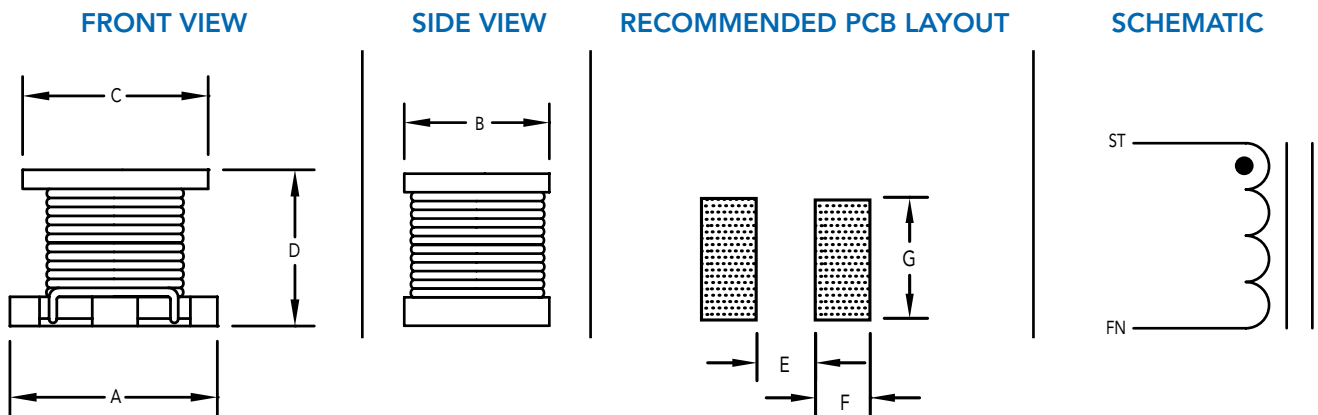
U.S. Standard (mm)

PART NUMBER	EIA	A (MAX.)	B (MAX.)	C (MAX.)	D (MAX.)	E (REF.)	F (REF.)	G (REF.)
RL-8000-1	1210	0.140 (3.56)	0.100 (2.50)	0.100 (2.50)	0.110 (2.80)	0.050 (1.30)	0.040 (0.90)	0.140 (3.56)
RL-8000-2	1812	0.190 (4.80)	0.137 (3.50)	0.150 (3.90)	0.120 (3.00)	0.060 (1.60)	0.050 (1.30)	0.170 (4.31)
RL-8000-3	2220	0.240 (6.00)	0.210 (5.30)	0.210 (5.30)	0.190 (4.90)	0.070 (1.70)	0.050 (1.30)	0.260 (6.60)

PART NUMBER	PART WEIGHT
RL-8000-1	0.16g (0.006oz)
RL-8000-2	0.17g (0.006oz)
RL-8000-3	0.18g (0.006oz)

#### SPECIFICATIONS:

1. TEMPERATURE RISE: 40°C MAX.
2. RATED CURRENT: BASED ON TEMPERATURE RISE & L/LOA = 10% MAX.
3. RESISTANCE TO SOLDER HEAT: 260°C FOR 10 SECONDS



SURFACE MOUNTS



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595 International Place, Rockledge, FL 32955-4200 USA • [www.rencousa.com](http://www.rencousa.com) • ISO 9001 Certified  
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# RL-8000-1

Renco Part No. RL-8000-1	Inductance ( $\mu$ H)	Q Min.	Test Frequency	DCR Max. (Ohms)	SRF (MHz) Typ.	I <sub>rms</sub> (A)	I <sub>sat</sub> (A)
RL-8000-1-1R0M	1.0	20.0	1.0 M	0.50	100.0	0.445	0.445
RL-8000-1-1R2M	1.2	20.0	1.0 M	0.60	100.0	0.425	0.425
RL-8000-1-1R5K	1.5	20.0	1.0 M	0.60	75.0	0.400	0.400
RL-8000-1-1R8K	1.8	20.0	1.0 M	0.70	60.0	0.390	0.390
RL-8000-1-2R2K	2.2	20.0	1.0 M	0.80	50.0	0.370	0.370
RL-8000-1-2R7K	2.7	20.0	1.0 M	0.90	43.0	0.320	0.320
RL-8000-1-3R3K	3.3	20.0	1.0 M	1.00	38.0	0.300	0.300
RL-8000-1-3R9K	3.9	20.0	1.0 M	1.10	35.0	0.290	0.290
RL-8000-1-4R7K	4.7	20.0	1.0 M	1.20	31.0	0.270	0.270
RL-8000-1-5R6K	5.6	20.0	1.0 M	1.30	28.0	0.250	0.250
RL-8000-1-6R8K	6.8	20.0	1.0 M	1.50	25.0	0.240	0.240
RL-8000-1-8R2K	8.2	20.0	1.0 M	1.60	23.0	0.225	0.225
RL-8000-1-100K	10.0	35.0	1.0 M	1.80	20.0	0.190	0.190
RL-8000-1-120K	12.0	35.0	1.0 M	2.00	18.0	0.180	0.180
RL-8000-1-150K	15.0	35.0	1.0 M	2.20	16.0	0.170	0.170
RL-8000-1-180K	18.0	35.0	1.0 M	2.50	15.0	0.165	0.165
RL-8000-1-220K	22.0	35.0	1.0 M	2.80	14.0	0.150	0.150
RL-8000-1-270K	27.0	40.0	1.0 M	3.10	13.0	0.125	0.125
RL-8000-1-330K	33.0	40.0	1.0 M	3.50	12.0	0.115	0.115
RL-8000-1-390K	39.0	40.0	1.0 M	3.90	11.0	0.110	0.110
RL-8000-1-470K	47.0	40.0	1.0 M	4.30	11.0	0.100	0.100
RL-8000-1-560K	56.0	40.0	1.0 M	4.90	10.0	0.085	0.085
RL-8000-1-680K	68.0	40.0	1.0 M	5.50	9.0	0.080	0.080
RL-8000-1-820K	82.0	40.0	796 K	6.20	8.5	0.070	0.070
RL-8000-1-101K	100.0	40.0	796 K	7.00	8.0	0.080	0.080
RL-8000-1-121K	120.0	40.0	796 K	8.00	7.5	0.075	0.075
RL-8000-1-151K	150.0	40.0	796 K	9.30	7.0	0.070	0.070
RL-8000-1-181K	180.0	40.0	796 K	10.20	6.0	0.065	0.065
RL-8000-1-221K	220.0	40.0	796 K	11.80	5.5	0.065	0.065
RL-8000-1-271K	270.0	40.0	796 K	12.50	5.0	0.065	0.065
RL-8000-1-331K	330.0	40.0	796 K	13.00	5.0	0.065	0.065
RL-8000-1-391K	390.0	50.0	796 K	22.00	5.0	0.050	0.050
RL-8000-1-471K	470.0	50.0	796 K	25.00	5.0	0.045	0.045
RL-8000-1-561K	560.0	50.0	796 K	28.00	5.0	0.040	0.040

## NOTES:

1. I<sub>rms</sub> - CURRENT THAT CAUSES THE TEMPERATURE TO RISE APPROX. 40°C ABOVE AMBIENT OF 25°C
2. I<sub>sat</sub> - DC CURRENT THAT WILL CAUSE INDUCTANCE TO DROP BY 10%
3. ELECTRICAL SPECIFICATIONS MEASURED AT 25°C
4. RESISTANCE TO SOLDER HEAT: 260°C FOR 10 SECONDS

## PART NUMBER IDENTIFICATION

RL-8000 -1 C 270 K  
(1) (2) (3) (4) (5)

- (1) SERIES NAME
- (2) DIMENSIONS
- (3) TYPE CODE C - CERAMIC
- (4) INDUCTANCE CODE
- (5) TOLERANCE CODE: K -  $\pm$ 10% M -  $\pm$ 20%  
X - CAN BE  $\pm$ 10% OR  $\pm$ 20%



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# RL-8000-2

Renco Part No. RL-8000-2	Inductance ( $\mu$ H)	Q Min.	Test Frequency	DCR Max. (Ohms)	SRF (MHz) Typ.	Irms (A)	Isat (A)
RL-8000-2-1R0M	1.0	20.0	1.0 M	0.20	120.0	0.500	0.500
RL-8000-2-1R2M	1.2	20.0	1.0 M	0.20	100.0	0.500	0.500
RL-8000-2-1R5M	1.5	20.0	1.0 M	0.30	85.0	0.500	0.500
RL-8000-2-1R8M	1.8	20.0	1.0 M	0.30	75.0	0.500	0.500
RL-8000-2-2R2M	2.2	20.0	1.0 M	0.30	62.0	0.500	0.500
RL-8000-2-2R7M	2.7	20.0	1.0 M	0.32	53.0	0.500	0.500
RL-8000-2-3R3M	3.3	20.0	1.0 M	0.35	47.0	0.500	0.500
RL-8000-2-3R9M	3.9	20.0	1.0 M	0.38	41.0	0.500	0.500
RL-8000-2-4R7K	4.7	30.0	1.0 M	0.40	38.0	0.500	0.500
RL-8000-2-5R6K	5.6	30.0	1.0 M	0.47	33.0	0.500	0.500
RL-8000-2-6R8K	6.8	30.0	1.0 M	0.50	31.0	0.450	0.450
RL-8000-2-8R2K	8.2	30.0	1.0 M	0.56	27.0	0.450	0.450
RL-8000-2-100K	10.0	35.0	1.0 M	0.56	23.0	0.400	0.400
RL-8000-2-120K	12.0	35.0	1.0 M	0.62	21.0	0.380	0.380
RL-8000-2-150K	15.0	35.0	1.0 M	0.73	19.0	0.360	0.360
RL-8000-2-180K	18.0	35.0	1.0 M	0.82	17.0	0.340	0.340
RL-8000-2-220K	22.0	35.0	1.0 M	0.94	15.0	0.320	0.320
RL-8000-2-270K	27.0	35.0	1.0 M	1.10	14.0	0.300	0.300
RL-8000-2-330K	33.0	35.0	1.0 M	1.20	12.0	0.270	0.270
RL-8000-2-390K	39.0	35.0	1.0 M	1.40	11.0	0.240	0.240
RL-8000-2-470K	47.0	35.0	1.0 M	1.50	10.0	0.220	0.220
RL-8000-2-560K	56.0	35.0	1.0 M	1.70	9.3	0.200	0.200
RL-8000-2-680K	68.0	35.0	1.0 M	1.90	8.4	0.180	0.180
RL-8000-2-820K	82.0	35.0	1.0 M	2.20	7.5	0.170	0.170
RL-8000-2-101K	100.0	40.0	796 K	2.50	6.8	0.160	0.160
RL-8000-2-121K	120.0	40.0	796 K	3.00	6.2	0.150	0.150
RL-8000-2-151K	150.0	40.0	796 K	3.70	5.5	0.130	0.130
RL-8000-2-181K	180.0	40.0	796 K	4.50	5.0	0.120	0.120
RL-8000-2-221K	220.0	40.0	796 K	5.40	4.5	0.110	0.110
RL-8000-2-271K	270.0	40.0	796 K	6.80	4.0	0.100	0.100
RL-8000-2-331K	330.0	40.0	796 K	8.20	3.6	0.095	0.095
RL-8000-2-391K	390.0	40.0	796 K	9.70	3.3	0.090	0.090
RL-8000-2-471K	470.0	40.0	796 K	11.80	3.0	0.080	0.080
RL-8000-2-561K	560.0	40.0	796 K	14.50	2.7	1.070	1.070
RL-8000-2-681K	680.0	40.0	796 K	17.00	2.5	0.065	0.065
RL-8000-2-821K	820.0	40.0	796 K	20.50	2.2	0.060	0.060
RL-8000-2-102K	1000.0	40.0	252 K	25.00	2.0	0.050	0.050
RL-8000-2-122K	1200.0	40.0	252 K	30.00	1.8	0.045	0.045
RL-8000-2-152K	1500.0	40.0	252 K	37.00	1.6	0.040	0.040
RL-8000-2-182K	1800.0	40.0	252 K	45.00	1.5	0.030	0.030
RL-8000-2-222K	2200.0	40.0	252 K	50.00	1.3	0.030	0.030

**NOTES:**

- 1. I<sub>rms</sub> - 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 10%

- 3. ELECTRICAL SPECIFICATIONS MEASURED AT 25°C
- 4. RESISTANCE TO SOLDER HEAT: 260°C FOR 10 SECONDS



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SURFACE MOUNTS

# RL-8000-3

Renco Part No. RL-8000-3	Inductance ( $\mu$ H)	Test Frequency	DCR Max. (Ohms)	SRF (MHz) Typ.	I <sub>rms</sub> (mA)	I <sub>sat</sub> (A)
RL-8000-3-R12M	0.12	1.0 M	0.0098	450.0	6.000	6.000
RL-8000-3-R27M	0.27	1.0 M	0.0140	300.0	5.300	5.300
RL-8000-3-R47M	0.47	1.0 M	0.0182	200.0	4.800	4.800
RL-8000-3-1R0M	1.00	1.0 M	0.0270	150.0	4.000	4.000
RL-8000-3-1R5M	1.50	1.0 M	0.0310	110.0	3.700	3.700
RL-8000-3-2R2M	2.20	1.0 M	0.0410	60.0	3.200	3.200
RL-8000-3-3R3M	3.30	1.0 M	0.0400	40.0	2.900	2.900
RL-8000-3-4R7M	4.70	1.0 M	0.0574	30.0	2.700	2.700
RL-8000-3-6R8M	6.80	1.0 M	0.1040	25.0	2.000	2.000
RL-8000-3-100X	10.00	1.0 M	0.1300	20.0	1.700	1.700
RL-8000-3-150X	15.00	1.0 M	0.2100	17.0	1.400	1.400
RL-8000-3-220X	22.00	1.0 M	0.2660	15.0	1.200	1.200
RL-8000-3-330X	33.00	1.0 M	0.4480	12.0	0.900	0.900
RL-8000-3-470X	47.00	1.0 M	0.5600	10.0	0.800	0.800
RL-8000-3-680X	68.00	1.0 M	0.9380	7.6	0.640	0.640
RL-8000-3-101X	100.00	100 K	1.2040	6.5	0.560	0.560
RL-8000-3-151X	150.00	100 K	2.6600	5.0	0.420	0.420
RL-8000-3-221X	220.00	100 K	3.3600	4.0	0.320	0.320
RL-8000-3-331X	330.00	100 K	6.1600	3.1	0.270	0.270
RL-8000-3-471X	470.00	100 K	7.5600	2.4	0.240	0.240
RL-8000-3-681X	680.00	100 K	11.3400	1.9	0.190	0.190
RL-8000-3-102X	1000.00	10 K	14.4200	1.7	0.150	0.150
RL-8000-3-222X	2200.00	10 K	30.1000	1.2	0.100	0.100
RL-8000-3-472X	4700.00	10 K	61.0400	0.8	0.070	0.070
RL-8000-3-103X	10000.00	10 K	140.0000	0.5	0.050	0.050

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- (2) DIMENSIONS
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