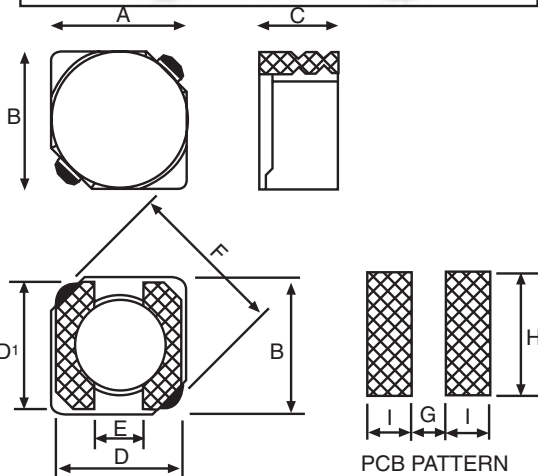




# RL-8100-1, RL-8100-2, RL-8100-3 RL-8100-4, RL-8100-5, RL-8100-6

## SHIELDED SMD POWER INDUCTORS



### PART NUMBER IDENTIFICATION

RL-8100 -1 1R2 Y  
(1) (2) (3) (4)

- (1) SERIES NAME
- (2) DIMENSIONS
- (3) INDUCTANCE VALUE
- (4) TOLERANCE

### MECHANICAL DIMENSION (m/m)

Part Number	A	B	C Max	D Ref	D <sup>1</sup> Ref	E Ref	F Max	G Ref	H Ref	I Ref
RL-8100-1	4.70 ± 0.30	4.70 ± 0.30	2.0	4.5	4.5	1.5	6.9	1.5	5.3	1.9
RL-8100-2	4.70 ± 0.30	4.70 ± 0.30	3.0	4.5	4.5	1.5	6.9	1.5	5.3	1.9
RL-8100-3	5.70 ± 0.30	5.70 ± 0.30	2.0	5.5	5.5	2.0	8.2	2.0	6.3	2.15
RL-8100-4	5.70 ± 0.30	5.70 ± 0.30	3.0	5.5	5.5	2.0	8.2	2.0	6.3	2.15
RL-8100-5	6.70 ± 0.30	6.70 ± 0.30	3.0	6.5	6.5	2.0	9.5	2.0	7.3	2.65
RL-8100-6	6.70 ± 0.30	6.70 ± 0.30	4.0	6.5	6.5	2.0	9.5	2.0	7.3	2.65

### FEATURES

- Excellent solderability and high heat resistance.
- Excellent current rating.
- Magnetically shielded construction.

### APPLICATIONS

Ideal for use in laptop computers, hard disks and other electronic equipment.

### Materials Construction

- a. Core: Ferrite DR Core
- b. Core: Ferrite RI Core
- c. Wire: Enamelled Copper Wire 2UEW
- d. Terminal: Tinned Copper Plate
- e. Adhesive: Epoxy EP-138

### General Specifications

Temperature Rise: 40°C Max.

Rated Current: Based on temperature

&  $\Delta L / L(OA) = 10\%$  Max.

Operating Temperature: -40°C ~ +105°C

Storage Temperature: -25°C ~ +125°C

Resistance to solder heat: 260°C for 10 seconds

### Tape and reel packaging

Part Number	Pieces per reel	Plastic reel size
RL-8100-1	3,000	13"
RL-8100-2	2,000	13"
RL-8100-3	2,000	13"
RL-8100-4	1,500	13"
RL-8100-5	1,000	13"
RL-8100-6	1,000	13"



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Part Number	L Tolerance	L ( $\mu$ H)	L Test Freq (Hz)	Test Level (V)	DCR Max ( $\Omega$ )	IDC Max (A)
RL-8100-1-1R0Y	$\pm 30\%$	1.0	7.96M	0.5	0.045	1.72
RL-8100-1-2R2Y	$\pm 30\%$	2.2	7.96M	0.5	0.075	1.32
RL-8100-1-2R7Y	$\pm 30\%$	2.7	7.96M	0.5	0.105	1.28
RL-8100-1-3R3Y	$\pm 30\%$	3.3	7.96M	0.5	0.110	1.04
RL-8100-1-3R9Y	$\pm 30\%$	3.9	7.96M	0.5	0.155	0.88
RL-8100-1-4R7Y	$\pm 30\%$	4.7	7.96M	0.5	0.162	0.84
RL-8100-1-5R6Y	$\pm 30\%$	5.6	7.96M	0.5	0.170	0.80
RL-8100-1-6R8Y	$\pm 30\%$	6.8	7.96M	0.5	0.180	0.76
RL-8100-1-8R2Y	$\pm 30\%$	8.2	7.96M	0.5	0.190	0.68
RL-8100-1-100Y	$\pm 30\%$	10.0	100.00K	0.5	0.200	0.61
RL-8100-1-120Y	$\pm 30\%$	12.0	100.00K	0.5	0.210	0.56
RL-8100-1-150Y	$\pm 30\%$	15.0	100.00K	0.5	0.240	0.50
RL-8100-1-180Y	$\pm 30\%$	18.0	100.00K	0.5	0.338	0.48
RL-8100-1-220Y	$\pm 30\%$	22.0	100.00K	0.5	0.397	0.41
RL-8100-1-270Y	$\pm 30\%$	27.0	100.00K	0.5	0.441	0.35
RL-8100-1-330Y	$\pm 30\%$	33.0	100.00K	0.5	0.694	0.32
RL-8100-1-390Y	$\pm 30\%$	39.0	100.00K	0.5	0.709	0.30

Note:

1. Inductance measured by LCR meter HP 4294/HP4291.
2. DCR measured by Milliohm meter CH 502AC.



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Part Number	Inductance (μH)	Testing Freq (Hz)	Test Level (V)	DCR (Ω) Max	I <sub>dc</sub> (A) Max
RL-8100-2-1R2Y	1.2±30%	100K	0.5	0.0236	2.56
RL-8100-2-1R8Y	1.8±30%	100K	0.5	0.0275	2.20
RL-8100-2-2R2Y	2.2±30%	100K	0.5	0.0313	2.04
RL-8100-2-2R7Y	2.7±30%	100K	0.5	0.0433	1.60
RL-8100-2-3R3Y	3.3±30%	100K	0.5	0.0492	1.57
RL-8100-2-3R9Y	3.9±30%	100K	0.5	0.0648	1.44
RL-8100-2-4R7Y	4.7±30%	100K	0.5	0.0720	1.32
RL-8100-2-5R6Y	5.6±30%	100K	0.5	0.1009	1.17
RL-8100-2-6R8Y	6.8±30%	100K	0.5	0.1089	1.12
RL-8100-2-8R2Y	8.2±30%	100K	0.5	0.1175	1.04
RL-8100-2-100Y	10.0±30%	100K	0.5	0.1283	1.00
RL-8100-2-120Y	12.0±30%	100K	0.5	0.1316	0.84
RL-8100-2-150Y	15.0±30%	100K	0.5	0.1490	0.76
RL-8100-2-180Y	18.0±30%	100K	0.5	0.1660	0.72
RL-8100-2-220Y	22.0±30%	100K	0.5	0.2350	0.70
RL-8100-2-270Y	27.0±30%	100K	0.5	0.2610	0.58
RL-8100-2-330Y	33.0±30%	100K	0.5	0.3313	0.56
RL-8100-2-390Y	39.0±30%	100K	0.5	0.3837	0.50
RL-8100-2-470Y	47.0±30%	100K	0.5	0.5870	0.48
RL-8100-2-560Y	56.0±30%	100K	0.5	0.6245	0.41
RL-8100-2-680Y	68.0±30%	100K	0.5	0.6990	0.35
RL-8100-2-820Y	82.0±30%	100K	0.5	0.9148	0.32
RL-8100-2-101Y	100.0±30%	100K	0.5	1.0200	0.29
RL-8100-2-121Y	120.0±30%	100K	0.5	1.2700	0.27
RL-8100-2-151Y	150.0±30%	100K	0.5	1.3500	0.24
RL-8100-2-181Y	180.0±30%	100K	0.5	1.5400	0.22

Note:

1. Inductance measured by LCR meter HP 4294/HP4291.
2. DCR measured by Milliohm meter CH 502AC.



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Part Number	Inductance ( $\mu\text{H}$ )	Testing Freq (Hz)	Test Level (V)	DCR ( $\Omega$ ) Max	$I_{dc}$ (A)
RL-8100-3-4R1Y	4.1 $\pm$ 30%	10K	0.5	0.057	1.95
RL-8100-3-5R4Y	5.4 $\pm$ 30%	10K	0.5	0.076	1.60
RL-8100-3-6R2Y	6.2 $\pm$ 30%	10K	0.5	0.096	1.40
RL-8100-3-8R9Y	8.9 $\pm$ 30%	10K	0.5	0.116	1.25
RL-8100-3-100Y	10.0 $\pm$ 30%	10K	0.5	0.124	1.20
RL-8100-3-120Y	12.0 $\pm$ 30%	10K	0.5	0.153	1.10
RL-8100-3-150Y	15.0 $\pm$ 30%	10K	0.5	0.196	0.97
RL-8100-3-180Y	18.0 $\pm$ 30%	10K	0.5	0.210	0.85
RL-8100-3-220Y	22.0 $\pm$ 30%	10K	0.5	0.290	0.80
RL-8100-3-270Y	27.0 $\pm$ 30%	10K	0.5	0.330	0.75
RL-8100-3-330Y	33.0 $\pm$ 30%	10K	0.5	0.385	0.65
RL-8100-3-390Y	39.0 $\pm$ 30%	10K	0.5	0.520	0.57
RL-8100-3-470Y	47.0 $\pm$ 30%	10K	0.5	0.595	0.54
RL-8100-3-560Y	56.0 $\pm$ 30%	10K	0.5	0.665	0.50
RL-8100-3-680Y	68.0 $\pm$ 30%	10K	0.5	0.840	0.43
RL-8100-3-820Y	82.0 $\pm$ 30%	10K	0.5	0.978	0.41
RL-8100-3-101Y	100.0 $\pm$ 30%	10K	0.5	1.200	0.36

Note:

1. Inductance measured by LCR meter HP 4294/HP4291.
2. DCR measured by Milliohm meter CH 502AC.

Part Number	Inductance ( $\mu\text{H}$ )	Testing Freq (Hz)	Test Level (V)	DCR ( $\Omega$ ) Max	$I_{dc}$ (A)
RL-8100-4-2R5Y	2.5 $\pm$ 30%	10K	0.5	0.018	2.60
RL-8100-4-3R0Y	3.0 $\pm$ 30%	10K	0.5	0.024	2.40
RL-8100-4-4R2Y	4.2 $\pm$ 30%	10K	0.5	0.031	2.20
RL-8100-4-5R3Y	5.3 $\pm$ 30%	10K	0.5	0.038	1.90
RL-8100-4-6R2Y	6.2 $\pm$ 30%	10K	0.5	0.045	1.80
RL-8100-4-8R2Y	8.2 $\pm$ 30%	10K	0.5	0.053	1.60
RL-8100-4-100Y	10.0 $\pm$ 30%	10K	0.5	0.065	1.30
RL-8100-4-120Y	12.0 $\pm$ 30%	10K	0.5	0.076	1.20
RL-8100-4-150Y	15.0 $\pm$ 30%	10K	0.5	0.103	1.10
RL-8100-4-180Y	18.0 $\pm$ 30%	10K	0.5	0.110	1.00
RL-8100-4-220Y	22.0 $\pm$ 30%	10K	0.5	0.122	0.90
RL-8100-4-270Y	27.0 $\pm$ 30%	10K	0.5	0.175	0.85
RL-8100-4-330Y	33.0 $\pm$ 30%	10K	0.5	0.189	0.75
RL-8100-4-390Y	39.0 $\pm$ 30%	10K	0.5	0.212	0.70
RL-8100-4-470Y	47.0 $\pm$ 30%	10K	0.5	0.250	0.62
RL-8100-4-560Y	56.0 $\pm$ 30%	10K	0.5	0.305	0.58
RL-8100-4-680Y	68.0 $\pm$ 30%	10K	0.5	0.355	0.52
RL-8100-4-820Y	82.0 $\pm$ 30%	10K	0.5	0.463	0.46
RL-8100-4-101Y	100.0 $\pm$ 30%	10K	0.5	0.520	0.42

Note:

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Part Number	Inductance (μH)	Testing Freq (Hz)	Test Level (V)	DCR (Ω) Max	I <sub>dc</sub> (A)
RL-8100-5-3R0Y	3.0±30%	10K	0.5	0.024	3.00
RL-8100-5-3R9Y	3.9±30%	10K	0.5	0.027	2.60
RL-8100-5-5R2Y	5.2±30%	10K	0.5	0.031	2.40
RL-8100-5-6R0Y	6.0±30%	10K	0.5	0.035	2.25
RL-8100-5-7R3Y	7.3±30%	10K	0.5	0.054	2.10
RL-8100-5-8R6Y	8.6±30%	10K	0.5	0.058	1.85
RL-8100-5-100Y	10.0±30%	10K	0.5	0.065	1.70
RL-8100-5-120Y	12.0±30%	10K	0.5	0.070	1.55
RL-8100-5-150Y	15.0±30%	10K	0.5	0.084	1.40
RL-8100-5-180Y	18.0±30%	10K	0.5	0.095	1.32
RL-8100-5-220Y	22.0±30%	10K	0.5	0.128	1.20
RL-8100-5-270Y	27.0±30%	10K	0.5	0.142	1.05
RL-8100-5-330Y	33.0±30%	10K	0.5	0.165	0.97
RL-8100-5-390Y	39.0±30%	10K	0.5	0.210	0.86
RL-8100-5-470Y	47.0±30%	10K	0.5	0.238	0.80
RL-8100-5-560Y	56.0±30%	10K	0.5	0.277	0.73
RL-8100-5-680Y	68.0±30%	10K	0.5	0.304	0.65
RL-8100-5-820Y	82.0±30%	10K	0.5	0.390	0.60
RL-8100-5-101Y	100.0±30%	10K	0.5	0.535	0.54

Note:

1. Inductance measured by LCR meter HP 4294/HP4291.
2. DCR measured by Milliohm meter CH 502AC.

Part Number	Inductance (μH)	Testing Freq (Hz)	Test Level (V)	DCR (Ω) Max	I <sub>dc</sub> (A)
RL-8100-6-3R3Y	3.3±30%	10K	0.5	0.020	3.50
RL-8100-6-5R0Y	5.0±30%	10K	0.5	0.024	2.90
RL-8100-6-6R2Y	6.2±30%	10K	0.5	0.027	2.50
RL-8100-6-7R4Y	7.4±30%	10K	0.5	0.031	2.30
RL-8100-6-8R7Y	8.7±30%	10K	0.5	0.034	2.20
RL-8100-6-100Y	10.0±30%	10K	0.5	0.038	2.00
RL-8100-6-120Y	12.0±30%	10K	0.5	0.053	1.70
RL-8100-6-150Y	15.0±30%	10K	0.5	0.057	1.60
RL-8100-6-180Y	18.0±30%	10K	0.5	0.092	1.50
RL-8100-6-220Y	22.0±30%	10K	0.5	0.096	1.30
RL-8100-6-270Y	27.0±30%	10K	0.5	0.109	1.20
RL-8100-6-330Y	33.0±30%	10K	0.5	0.124	1.10
RL-8100-6-390Y	39.0±30%	10K	0.5	0.138	1.00
RL-8100-6-470Y	47.0±30%	10K	0.5	0.155	0.95
RL-8100-6-560Y	56.0±30%	10K	0.5	0.202	0.85
RL-8100-6-680Y	68.0±30%	10K	0.5	0.234	0.75
RL-8100-6-820Y	82.0±30%	10K	0.5	0.324	0.70
RL-8100-6-101Y	100.0±30%	10K	0.5	0.358	0.65

Note:

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