



## Features

- Shrink tubing protected winding
- Fixed lead spacing
- High saturation current up to 10 A
- Inductance range: 1  $\mu$ H to 100 mH
- RoHS compliant\*

## Applications

- DC/DC converters
- Power supplies
- Output chokes
- EMI/RFI filters

## RLB0913 Series Radial Lead Inductor

### Electrical Specifications @ 25 °C

Bourns Part Number	Inductance		Q Min.	Q Test Freq. (MHz)	SRF Min. (MHz)	DCR Typ. ( $\Omega$ )	DCR Max. ( $\Omega$ )	I rms Typ. (A)	I sat Typ. (A)	** K-Factor
	L ( $\mu$ H)	Tol. (%)								
RLB0913-1R0K	1	$\pm 10$	20	7.96	150	0.009	0.013	7.45	10	189.0
RLB0913-1R5K	1.5	$\pm 10$	20	7.96	130	0.013	0.016	5.75	8.5	159.9
RLB0913-2R2K	2.2	$\pm 10$	20	7.96	100	0.014	0.021	5.6	6.5	122.3
RLB0913-3R3K	3.3	$\pm 10$	20	7.96	79	0.02	0.025	4.6	5.5	99.0
RLB0913-4R7K	4.7	$\pm 10$	20	7.96	51	0.02	0.03	4	4.3	83.2
RLB0913-6R8K	6.8	$\pm 10$	20	7.96	29	0.025	0.035	3.65	3.7	67.1
RLB0913-100K	10	$\pm 10$	50	2.52	14	0.036	0.045	3.1	3	59.4
RLB0913-120K	12	$\pm 10$	50	2.52	13	0.038	0.05	2.9	2.7	53.3
RLB0913-150K	15	$\pm 10$	40	2.52	12	0.043	0.056	2.8	2.3	48.3
RLB0913-180K	18	$\pm 10$	40	2.52	11	0.048	0.061	2.6	2.2	42.4
RLB0913-220K	22	$\pm 10$	40	2.52	9.2	0.053	0.07	2.55	2	39.2
RLB0913-270K	27	$\pm 10$	30	2.52	8.5	0.061	0.08	2.5	1.7	35.2
RLB0913-330K	33	$\pm 10$	30	2.52	7.8	0.070	0.09	2.45	1.6	31.0
RLB0913-390K	39	$\pm 10$	30	2.52	6.9	0.076	0.1	2.4	1.5	29.3
RLB0913-470K	47	$\pm 10$	30	2.52	6.5	0.107	0.16	2.35	1.4	26.3
RLB0913-560K	56	$\pm 10$	30	2.52	5.4	0.12	0.18	1.75	1.3	23.9
RLB0913-680K	68	$\pm 10$	30	2.52	4.9	0.169	0.21	1.4	1.2	21.9
RLB0913-820K	82	$\pm 10$	30	2.52	4.1	0.189	0.23	1.35	1.1	19.8
RLB0913-101K	100	$\pm 10$	20	0.796	3.7	0.219	0.28	1.2	0.91	18.1
RLB0913-121K	120	$\pm 10$	20	0.796	3.4	0.266	0.32	1.05	0.84	16.4
RLB0913-151K	150	$\pm 10$	20	0.796	3.2	0.305	0.37	1	0.75	14.7
RLB0913-181K	180	$\pm 10$	20	0.796	2.8	0.399	0.58	0.75	0.69	13.4
RLB0913-221K	220	$\pm 10$	20	0.796	2.7	0.453	0.65	0.7	0.64	12.2
RLB0913-271K	270	$\pm 10$	20	0.796	2.4	0.627	0.75	0.6	0.57	11.0
RLB0913-331K	330	$\pm 10$	20	0.796	2.3	0.719	0.85	0.56	0.54	9.9
RLB0913-391K	390	$\pm 10$	20	0.796	2.1	0.899	1	0.5	0.48	9.2
RLB0913-471K	470	$\pm 10$	20	0.796	1.9	1.018	1.1	0.47	0.46	8.3
RLB0913-561K	560	$\pm 10$	20	0.796	1.8	1.136	1.4	0.45	0.41	7.6
RLB0913-681K	680	$\pm 10$	20	0.796	1.6	1.272	1.6	0.42	0.38	6.8
RLB0913-821K	820	$\pm 10$	20	0.796	1.5	1.702	1.8	0.41	0.35	6.3
RLB0913-102K	1000	$\pm 10$	50	0.252	1.3	2.35	2.9	0.35	0.29	5.7
RLB0913-122K	1200	$\pm 10$	50	0.252	1.1	2.672	4	0.3	0.13	5.2
RLB0913-152K	1500	$\pm 10$	20	0.252	1	3.626	6.1	0.285	0.08	4.7
RLB0913-182K	1800	$\pm 10$	20	0.252	1	4.063	6.4	0.27	0.08	4.2
RLB0913-222K	2200	$\pm 10$	20	0.252	0.9	4.600	6.8	0.245	0.08	3.8
RLB0913-272K	2700	$\pm 10$	20	0.252	0.9	5.251	7.7	0.23	0.08	3.4
RLB0913-332K	3300	$\pm 10$	20	0.252	0.7	7.478	9	0.195	0.08	3.1
RLB0913-392K	3900	$\pm 10$	20	0.252	0.6	8.287	14	0.185	0.08	2.9

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\*\*K-Factor: To calculate core flux density,  $B_p$ -p (gauss) =  $K \times L(\mu H) \times \Delta I$  (peak-to-peak ripple current, A), determine core loss from *Core Loss vs. Flux Density* plot.

\* RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.

Specifications are subject to change without notice.

The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time. Users should verify actual device performance in their specific applications.

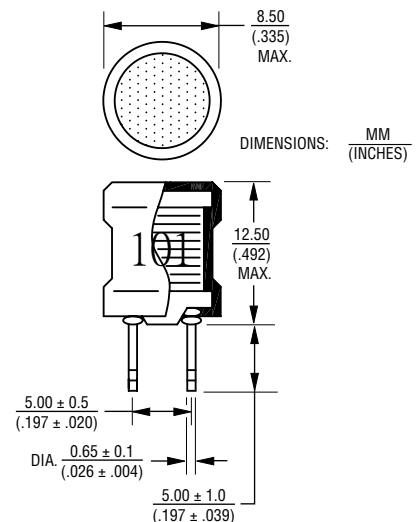
### General Specifications

Inductance Test Frequency Voltage  
 1-6.8  $\mu$ H ..... 7.96 MHz/1 V  
 10-100,000  $\mu$ H ..... 1 kHz/1 V  
 Operating Temperature  
 ..... -55 °C to +125 °C  
 (Temperature rise included)  
 Storage Temperature ..... -55 °C to +125 °C  
 Temperature Rise ..... 40 °C at rated I rms  
 Rated Current  
 ..... Inductance drops 10 % at I sat

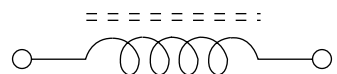
### Materials

Core ..... Ferrite  
 Wire ..... Enameled copper  
 Terminal Finish ..... Cu/Ag/Sn  
 Tubing ..... Shrink tube 125 °C, 600 V  
 Packaging ..... 200 pcs. per tray

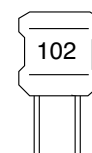
### Product Dimensions



### Electrical Schematic



### Typical Part Marking



Inductance Code:  
 - First two digits are significant  
 - Third digit represents the number of zeroes to follow

# RLB0913 Series Radial Lead Inductor

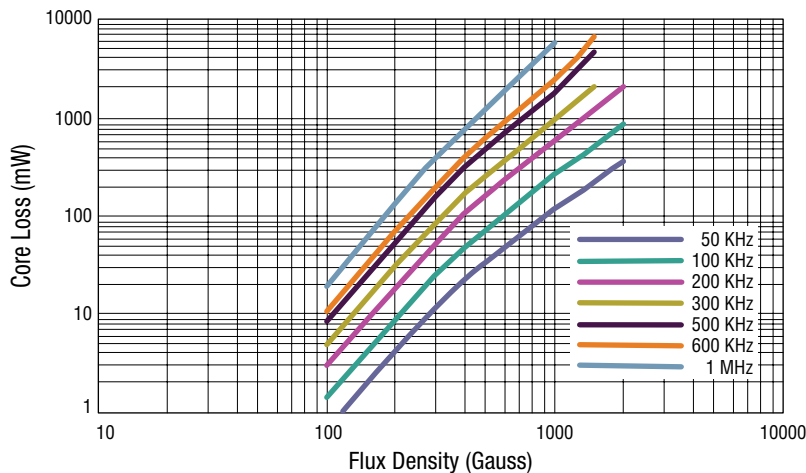
**BOURNS®**

## Electrical Specifications @ 25 °C (Continued)

Bourns Part Number	Inductance		Q Min.	Q Test Freq. (MHz)	SRF Min. (MHz)	DCR Typ. (Ω)	DCR Max. (Ω)	I rms Typ. (A)	I sat Typ. (A)	** K-Factor
	L (μH)	Tol. (%)								
RLB0913-472K	4700	± 10	20	0.252	0.5	9.244	16	0.175	0.05	2.6
RLB0913-562K	5600	± 10	20	0.252	0.4	13.38	18	0.145	0.05	2.4
RLB0913-682K	6800	± 10	20	0.252	0.4	15.18	19	0.135	0.05	2.2
RLB0913-822K	8200	± 10	20	0.252	0.3	17.10	21	0.13	0.05	2.0
RLB0913-103K	10,000	± 10	40	0.0796	0.3	19.59	25	0.12	0.05	1.8
RLB0913-123K	12,000	± 10	40	0.0796	0.3	22.03	33	0.115	0.04	1.6
RLB0913-153K	15,000	± 10	40	0.0796	0.2	30.47	37	0.1	0.04	1.5
RLB0913-183K	18,000	± 10	30	0.0796	0.2	34.38	40	0.09	0.04	1.3
RLB0913-223K	22,000	± 10	30	0.0796	0.1	45.6	56	0.08	0.03	1.2
RLB0913-273K	27,000	± 10	30	0.0796	0.1	52.26	62	0.075	0.03	1.1
RLB0913-333K	33,000	± 10	30	0.0796	0.1	59.8	70	0.07	0.03	1.0
RLB0913-393K	39,000	± 10	30	0.0796	0.1	67.81	80	0.065	0.03	0.9
RLB0913-473K	47,000	± 10	20	0.0796	0.1	88.83	99	0.055	0.03	0.8
RLB0913-563K	56,000	± 10	20	0.0796	0.1	100.3	135	0.05	0.02	0.7
RLB0913-683K	68,000	± 10	20	0.0796	0.1	141.9	150	0.045	0.02	0.7
RLB0913-823K	82,000	± 10	20	0.0796	0.1	183.7	212	0.04	0.02	0.6
RLB0913-104K	100,000	± 10	20	0.0252	0.1	210.1	235	0.04	0.02	0.6

\*\*K-Factor: To calculate core flux density,  $B_{p-p}$  (gauss) =  $K \times L(\mu H) \times \Delta I$  (peak-to-peak ripple current, A), determine core loss from *Core Loss vs. Flux Density* plot.

## Core Loss vs. Flux Density



## How to Order

**RLB0913 - 102 K**

Model \_\_\_\_\_  
 Value Code (see table) \_\_\_\_\_  
 Tolerance Code \_\_\_\_\_  
 K = ±10 %

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