

Features

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

Applications

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

BOURNS®

RLB0913 Series Radial Lead Inductor

Electrical Specifications @ 25 °C

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

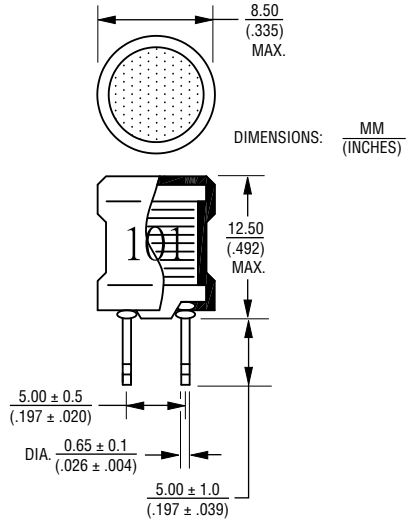
General Specifications

Inductance Test Frequency Voltage
1-6.8 µH ..... 7.96 MHz/1 V
10-100,000 µH ..... 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

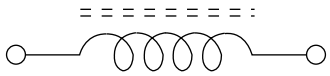
Materials

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

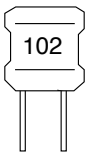
Product Dimensions



Electrical Schematic



Typical Part Marking



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

WARNING Cancer and Reproductive Harm
www.P65Warnings.ca.gov

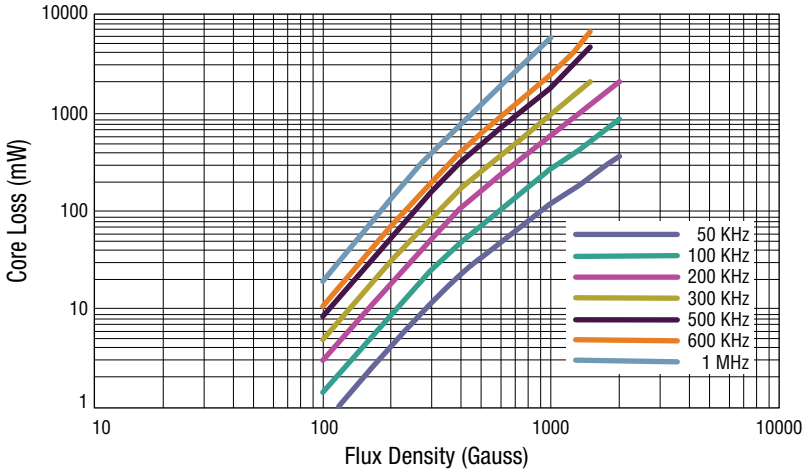
*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.
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Electrical Specifications @ 25 °C *(Continued)*

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, Bp-p (gauss) = K x L(μH) x Δ 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 %

Asia-Pacific:
Tel: +886-2 2562-4117
Email: asiacus@bourns.com

Europe:
Tel: +36 88 520 390
Email: eurocus@bourns.com

The Americas:
Tel: +1-951 781-5500
Email: americus@bourns.com

www.bourns.com

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