



## Features

- Available in E12 series
- Inductance range: 1.0  $\mu$ H to 47 mH
- RoHS compliant\*

## Applications

- Power supplies
- DC/DC converters
- General use

# RLB9012 Radial Inductor

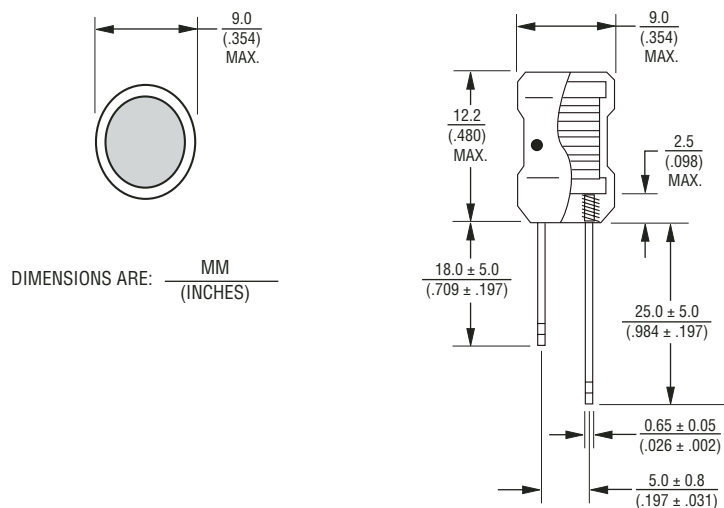
## General Specifications

|                                        |                        |
|----------------------------------------|------------------------|
| Inductance Drop at Rated Current (IDC) | .....5 %               |
| Operating Temperature                  | .....-55 °C to +105 °C |
| Storage Temperature                    | .....-40 °C to +105 °C |

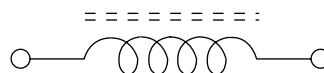
## Materials

|               |                                    |
|---------------|------------------------------------|
| Core Material | .....Ferrite DR core               |
| Wire          | .....Enamelled copper wire         |
| Terminal      | .....Cu/AG/Sn                      |
| Tube          | .....Shrinkable tube 125 °C, 600 V |

## Product Dimensions



## Electrical Schematic



## Typical Part Marking



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

## Electrical Characteristics

| BOURNS Part No. | Inductance ( $\mu$ H) | Q ref. | Test freq. (MHz) |      | SRF (MHz) min. | RDC (ohms) max. | IDC (A) max. |
|-----------------|-----------------------|--------|------------------|------|----------------|-----------------|--------------|
|                 |                       |        | L                | Q    |                |                 |              |
| RLB9012-1R0ML   | 1.0 $\pm$ 20 %        | 20     | 1K               | 7.96 | 150.00         | 0.013           | 10.0         |
| RLB9012-1R5ML   | 1.5 $\pm$ 20 %        | 20     | 1K               | 7.96 | 100.00         | 0.016           | 8.50         |
| RLB9012-2R2ML   | 2.2 $\pm$ 20 %        | 20     | 1K               | 7.96 | 90.00          | 0.021           | 6.50         |
| RLB9012-3R3ML   | 3.3 $\pm$ 20 %        | 20     | 1K               | 7.96 | 65.00          | 0.025           | 5.50         |
| RLB9012-4R7ML   | 4.7 $\pm$ 20 %        | 20     | 1K               | 7.96 | 51.00          | 0.030           | 4.60         |
| RLB9012-6R8ML   | 6.8 $\pm$ 20 %        | 20     | 1K               | 7.96 | 29.00          | 0.035           | 4.10         |
| RLB9012-100KL   | 10.0 $\pm$ 10 %       | 50     | 1K               | 2.52 | 14.00          | 0.045           | 3.40         |
| RLB9012-120KL   | 12.0 $\pm$ 10 %       | 50     | 1K               | 2.52 | 13.00          | 0.050           | 3.10         |
| RLB9012-150KL   | 15.0 $\pm$ 10 %       | 50     | 1K               | 2.52 | 12.00          | 0.056           | 2.90         |
| RLB9012-180KL   | 18.0 $\pm$ 10 %       | 40     | 1K               | 2.52 | 11.00          | 0.061           | 2.66         |
| RLB9012-220KL   | 22.0 $\pm$ 10 %       | 40     | 1K               | 2.52 | 9.20           | 0.070           | 2.40         |
| RLB9012-270KL   | 27.0 $\pm$ 10 %       | 40     | 1K               | 2.52 | 8.50           | 0.080           | 2.22         |
| RLB9012-330KL   | 33.0 $\pm$ 10 %       | 30     | 1K               | 2.52 | 7.80           | 0.090           | 2.05         |
| RLB9012-390KL   | 39.0 $\pm$ 10 %       | 30     | 1K               | 2.52 | 6.90           | 0.100           | 1.85         |
| RLB9012-470KL   | 47.0 $\pm$ 10 %       | 30     | 1K               | 2.52 | 6.50           | 0.160           | 1.77         |
| RLB9012-560KL   | 56.0 $\pm$ 10 %       | 30     | 1K               | 2.52 | 5.40           | 0.180           | 1.48         |

Packaging: 200 pieces per bag; available 500 pieces per tape and reel (13-inch reel) by ordering P/N RLH9012-xxxML or -xxxKL.

\*RoHS Directive 2002/95/EC Jan 27 2003 including Annex  
Specifications are subject to change without notice.  
Customers should verify actual device performance in their specific applications.

# RLB9012 Radial Inductor

**BOURNS®**

## Electrical Characteristics (Continued)

| BOURNS Part No. | Inductance<br>( $\mu$ H) | Q<br>ref. | Test freq. (MHz) |       | SRF<br>(MHz) min. | RDC<br>(ohms) max. | IDC<br>(A) max. |
|-----------------|--------------------------|-----------|------------------|-------|-------------------|--------------------|-----------------|
|                 |                          |           | L                | Q     |                   |                    |                 |
| RLB9012-680KL   | 68.0 $\pm$ 10 %          | 30        | 1K               | 2.52  | 4.90              | 0.210              | 1.36            |
| RLB9012-820KL   | 82.0 $\pm$ 10 %          | 30        | 1K               | 2.52  | 4.10              | 0.230              | 1.30            |
| RLB9012-101KL   | 100.0 $\pm$ 10 %         | 20        | 1K               | 0.796 | 3.70              | 0.280              | 1.40            |
| RLB9012-121KL   | 120.0 $\pm$ 10 %         | 20        | 1K               | 0.796 | 3.40              | 0.320              | 1.25            |
| RLB9012-151KL   | 150.0 $\pm$ 10 %         | 20        | 1K               | 0.796 | 3.20              | 0.370              | 1.15            |
| RLB9012-181KL   | 180.0 $\pm$ 10 %         | 20        | 1K               | 0.796 | 2.80              | 0.580              | 1.08            |
| RLB9012-221KL   | 220.0 $\pm$ 10 %         | 20        | 1K               | 0.796 | 2.70              | 0.650              | 1.00            |
| RLB9012-271KL   | 270.0 $\pm$ 10 %         | 20        | 1K               | 0.796 | 2.40              | 0.750              | 0.90            |
| RLB9012-331KL   | 330.0 $\pm$ 10 %         | 20        | 1K               | 0.796 | 2.30              | 0.850              | 0.78            |
| RLB9012-391KL   | 390.0 $\pm$ 10 %         | 20        | 1K               | 0.796 | 2.10              | 1.000              | 0.74            |
| RLB9012-471KL   | 470.0 $\pm$ 10 %         | 20        | 1K               | 0.796 | 1.90              | 1.100              | 0.68            |
| RLB9012-561KL   | 560.0 $\pm$ 10 %         | 20        | 1K               | 0.796 | 1.80              | 1.400              | 0.64            |
| RLB9012-681KL   | 680.0 $\pm$ 10 %         | 20        | 1K               | 0.796 | 1.60              | 1.600              | 0.59            |
| RLB9012-821KL   | 820.0 $\pm$ 10 %         | 20        | 1K               | 0.796 | 1.50              | 1.800              | 0.56            |
| RLB9012-102KL   | 1000.0 $\pm$ 10 %        | 20        | 1K               | 0.252 | 1.30              | 2.900              | 0.51            |
| RLB9012-122KL   | 1200.0 $\pm$ 10 %        | 15        | 1K               | 0.252 | 1.20              | 3.400              | 0.48            |
| RLB9012-152KL   | 1500.0 $\pm$ 10 %        | 15        | 1K               | 0.252 | 1.10              | 3.800              | 0.43            |
| RLB9012-182KL   | 1800.0 $\pm$ 10 %        | 15        | 1K               | 0.252 | 1.00              | 5.300              | 0.39            |
| RLB9012-222KL   | 2200.0 $\pm$ 10 %        | 15        | 1K               | 0.252 | 0.80              | 5.900              | 0.36            |
| RLB9012-272KL   | 2700.0 $\pm$ 10 %        | 15        | 1K               | 0.252 | 0.70              | 8.200              | 0.32            |
| RLB9012-332KL   | 3300.0 $\pm$ 10 %        | 15        | 1K               | 0.252 | 0.60              | 9.100              | 0.29            |
| RLB9012-392KL   | 3900.0 $\pm$ 10 %        | 15        | 1K               | 0.252 | 0.55              | 9.900              | 0.27            |
| RLB9012-472KL   | 4700.0 $\pm$ 10 %        | 15        | 1K               | 0.252 | 0.50              | 13.60              | 0.24            |
| RLB9012-562KL   | 5600.0 $\pm$ 10 %        | 15        | 1K               | 0.252 | 0.45              | 14.90              | 0.22            |
| RLB9012-682KL   | 6800.0 $\pm$ 10 %        | 15        | 1K               | 0.252 | 0.40              | 20.70              | 0.20            |
| RLB9012-822KL   | 8200.0 $\pm$ 10 %        | 15        | 1K               | 0.252 | 0.35              | 22.70              | 0.18            |
| RLB9012-103KL   | 10,000 $\pm$ 10 %        | 15        | 1K               | 0.079 | 0.32              | 25.10              | 0.17            |
| RLB9012-123KL   | 12,000 $\pm$ 10 %        | 15        | 1K               | 0.079 | 0.28              | 34.70              | 0.15            |
| RLB9012-153KL   | 15,000 $\pm$ 10 %        | 15        | 1K               | 0.079 | 0.25              | 48.90              | 0.14            |
| RLB9012-183KL   | 18,000 $\pm$ 10 %        | 15        | 1K               | 0.079 | 0.23              | 53.60              | 0.12            |
| RLB9012-103KL   | 10,000 $\pm$ 10 %        | 15        | 1K               | 0.079 | 0.32              | 25.10              | 0.17            |
| RLB9012-123KL   | 12,000 $\pm$ 10 %        | 15        | 1K               | 0.079 | 0.28              | 34.70              | 0.15            |
| RLB9012-153KL   | 15,000 $\pm$ 10 %        | 15        | 1K               | 0.079 | 0.25              | 48.90              | 0.14            |
| RLB9012-183KL   | 18,000 $\pm$ 10 %        | 15        | 1K               | 0.079 | 0.23              | 53.60              | 0.12            |
| RLB9012-223KL   | 22,000 $\pm$ 10 %        | 15        | 1K               | 0.079 | 0.21              | 59.30              | 0.11            |
| RLB9012-273KL   | 27,000 $\pm$ 10 %        | 15        | 1K               | 0.079 | 0.19              | 82.70              | 0.10            |
| RLB9012-323KL   | 33,000 $\pm$ 10 %        | 15        | 1K               | 0.079 | 0.17              | 91.50              | 0.09            |
| RLB9012-393KL   | 39,000 $\pm$ 10 %        | 15        | 1K               | 0.079 | 0.15              | 125.50             | 0.08            |
| RLB9012-473KL   | 47,000 $\pm$ 10 %        | 15        | 1K               | 0.079 | 0.12              | 137.80             | 0.08            |

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