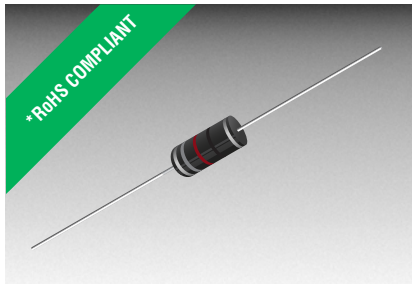




**THE DATASHEET OF  
9230-84-RC**





**BOURNS®**

## Features

- Formerly J. W. Miller® model
- High Q value
- Inductance range: 0.1  $\mu$ H to 1000  $\mu$ H
- RoHS compliant\*

## Applications

- Filters
- Output chokes

# 9230 Series Molded Axial Inductor

### Electrical Specifications

| Bourns Part No. | Inductance |          | Q Min. | Test Frequency (MHz) | SRF (MHz) Min. | DCR ( $\Omega$ ) Max. | Idc (mA) | Core Material |
|-----------------|------------|----------|--------|----------------------|----------------|-----------------------|----------|---------------|
|                 | ( $\mu$ H) | Tol. (%) |        |                      |                |                       |          |               |
| 9230-94-RC      | 0.10       | $\pm 10$ | 40     | 25                   | 690            | 0.07                  | 1100     | Phenolic      |
| 9230-96-RC      | 0.12       | $\pm 10$ | 40     | 25                   | 650            | 0.08                  | 1100     | Phenolic      |
| 9230-00-RC      | 0.15       | $\pm 10$ | 38     | 25                   | 600            | 0.10                  | 1100     | Phenolic      |
| 9230-02-RC      | 0.18       | $\pm 10$ | 35     | 25                   | 550            | 0.12                  | 1010     | Phenolic      |
| 9230-04-RC      | 0.22       | $\pm 10$ | 33     | 25                   | 510            | 0.14                  | 935      | Phenolic      |
| 9230-06-RC      | 0.27       | $\pm 10$ | 33     | 25                   | 430            | 0.16                  | 875      | Phenolic      |
| 9230-08-RC      | 0.33       | $\pm 10$ | 30     | 25                   | 410            | 0.20                  | 780      | Phenolic      |
| 9230-10-RC      | 0.39       | $\pm 10$ | 30     | 25                   | 380            | 0.30                  | 640      | Phenolic      |
| 9230-12-RC      | 0.47       | $\pm 10$ | 30     | 25                   | 340            | 0.35                  | 590      | Phenolic      |
| 9230-14-RC      | 0.56       | $\pm 10$ | 30     | 25                   | 300            | 0.50                  | 495      | Phenolic      |
| 9230-16-RC      | 0.68       | $\pm 10$ | 28     | 25                   | 275            | 0.60                  | 450      | Phenolic      |
| 9230-18-RC      | 0.82       | $\pm 10$ | 28     | 25                   | 250            | 0.85                  | 380      | Phenolic      |
| 9230-20-RC      | 1.0        | $\pm 10$ | 25     | 25                   | 230            | 1.00                  | 350      | Phenolic      |
| 9230-22-RC      | 1.2        | $\pm 10$ | 25     | 7.9                  | 150            | 0.18                  | 825      | Ferrite       |
| 9230-24-RC      | 1.5        | $\pm 10$ | 28     | 7.9                  | 140            | 0.22                  | 745      | Ferrite       |
| 9230-26-RC      | 1.8        | $\pm 10$ | 30     | 7.9                  | 125            | 0.30                  | 640      | Ferrite       |
| 9230-28-RC      | 2.2        | $\pm 10$ | 30     | 7.9                  | 115            | 0.40                  | 550      | Ferrite       |
| 9230-30-RC      | 2.7        | $\pm 10$ | 37     | 7.9                  | 100            | 0.50                  | 495      | Ferrite       |
| 9230-32-RC      | 3.3        | $\pm 10$ | 45     | 7.9                  | 90             | 0.85                  | 380      | Ferrite       |
| 9230-34-RC      | 3.9        | $\pm 10$ | 45     | 7.9                  | 82             | 1.0                   | 350      | Ferrite       |
| 9230-36-RC      | 4.7        | $\pm 10$ | 45     | 7.9                  | 75             | 1.2                   | 320      | Ferrite       |
| 9230-38-RC      | 5.6        | $\pm 10$ | 50     | 7.9                  | 68             | 1.8                   | 260      | Ferrite       |
| 9230-40-RC      | 6.8        | $\pm 10$ | 50     | 7.9                  | 60             | 2.0                   | 245      | Ferrite       |
| 9230-42-RC      | 8.2        | $\pm 10$ | 55     | 7.9                  | 55             | 2.7                   | 210      | Ferrite       |
| 9230-44-RC      | 10         | $\pm 10$ | 55     | 7.9                  | 50             | 3.7                   | 180      | Ferrite       |
| 9230-46-RC      | 12         | $\pm 10$ | 45     | 2.5                  | 40             | 2.7                   | 210      | Ferrite       |
| 9230-48-RC      | 15         | $\pm 10$ | 45     | 2.5                  | 35             | 2.8                   | 205      | Ferrite       |
| 9230-50-RC      | 18         | $\pm 10$ | 50     | 2.5                  | 32             | 3.1                   | 195      | Ferrite       |
| 9230-52-RC      | 22         | $\pm 10$ | 50     | 2.5                  | 25             | 3.3                   | 190      | Ferrite       |
| 9230-54-RC      | 27         | $\pm 10$ | 50     | 2.5                  | 22             | 3.5                   | 185      | Ferrite       |
| 9230-56-RC      | 33         | $\pm 10$ | 45     | 2.5                  | 24             | 3.4                   | 187      | Ferrite       |
| 9230-58-RC      | 39         | $\pm 10$ | 45     | 2.5                  | 22             | 3.6                   | 180      | Ferrite       |
| 9230-60-RC      | 47         | $\pm 10$ | 45     | 2.5                  | 20             | 4.5                   | 165      | Ferrite       |
| 9230-62-RC      | 56         | $\pm 10$ | 45     | 2.5                  | 18             | 5.7                   | 145      | Ferrite       |
| 9230-64-RC      | 68         | $\pm 10$ | 50     | 2.5                  | 15             | 6.7                   | 135      | Ferrite       |
| 9230-66-RC      | 82         | $\pm 10$ | 50     | 2.5                  | 14             | 7.3                   | 130      | Ferrite       |
| 9230-68-RC      | 100        | $\pm 10$ | 50     | 2.5                  | 13             | 8.0                   | 125      | Ferrite       |
| 9230-70-RC      | 120        | $\pm 10$ | 30     | 0.79                 | 12             | 13                    | 97       | Ferrite       |
| 9230-72-RC      | 150        | $\pm 10$ | 30     | 0.79                 | 11             | 15                    | 85       | Ferrite       |
| 9230-74-RC      | 180        | $\pm 10$ | 30     | 0.79                 | 10             | 17                    | 79       | Ferrite       |
| 9230-76-RC      | 220        | $\pm 10$ | 30     | 0.79                 | 9              | 21                    | 73       | Ferrite       |
| 9230-78-RC      | 270        | $\pm 10$ | 30     | 0.79                 | 8              | 25                    | 65       | Ferrite       |
| 9230-80-RC      | 330        | $\pm 10$ | 30     | 0.79                 | 7              | 28                    | 62       | Ferrite       |
| 9230-82-RC      | 390        | $\pm 10$ | 30     | 0.79                 | 6.5            | 35                    | 55       | Ferrite       |
| 9230-84-RC      | 470        | $\pm 10$ | 30     | 0.79                 | 6              | 42                    | 50       | Ferrite       |
| 9230-86-RC      | 560        | $\pm 10$ | 30     | 0.79                 | 5              | 46                    | 48       | Ferrite       |
| 9230-88-RC      | 680        | $\pm 10$ | 30     | 0.79                 | 4.2            | 60                    | 42       | Ferrite       |
| 9230-90-RC      | 820        | $\pm 10$ | 30     | 0.79                 | 3.8            | 65                    | 40       | Ferrite       |
| 9230-92-RC      | 1000       | $\pm 10$ | 30     | 0.79                 | 3.4            | 72                    | 38       | Ferrite       |

### General Specifications

Temperature Rise ..... 35 °C at Idc  
 Operating Temperature  
 Ferrite ..... -55 °C to +125 °C  
 Phenolic ..... -55 °C to +105 °C  
 Storage Temperature  
 Ferrite ..... -55 °C to +125 °C  
 Phenolic ..... -55 °C to +105 °C  
 Dielectric Strength ..... 1000 Vrms

### Materials

Core ..... Phenolic or Ferrite  
 Wire ..... Enameled copper  
 Terminal Coating ..... Sn  
 Packaging  
 Standard ..... 1000 pcs. per bag  
 Optional ..... 5000 pcs. per 14-inch reel

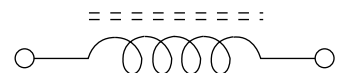
### How to Order

**9230 - 02 - - RC**

Model \_\_\_\_\_  
 Value Code \_\_\_\_\_  
 Two-digit code from table  
 (Example: -02 = 0.18  $\mu$ H)  
 Packaging Code \_\_\_\_\_  
 Blank = 1000 pcs./bag  
 TR = 5000 pcs./14-inch reel  
 Compliance Code \_\_\_\_\_  
 RC = RoHS compliant\*

- Examples:
- 9230-00-RC = 0.15  $\mu$ H packaged 1000 pcs./bag.
  - 9230-16-TR-RC = 0.68  $\mu$ H packaged 5000 pcs./14-inch reel.

### Electrical Schematic



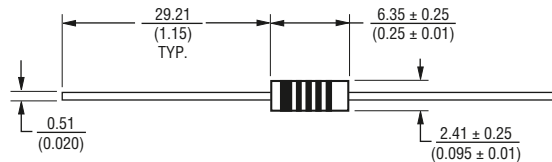
**WARNING Cancer and Reproductive Harm**  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

\*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. Users should verify actual device performance in their specific applications. The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at [www.bourns.com/docs/legal/disclaimer.pdf](http://www.bourns.com/docs/legal/disclaimer.pdf).

# 9230 Series Molded Axial Inductor

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## Product Dimensions

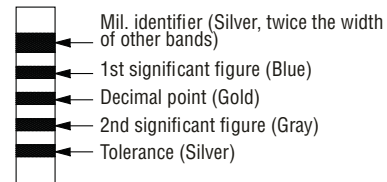


DIMENSIONS:  $\frac{\text{MM}}{\text{(INCHES)}}$

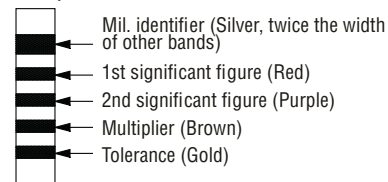
## Typical Part Marking - MIL-STD Color Code

| Color  | 1st & 2nd Significant Figure or Decimal Point | Multiplier | Tolerance |
|--------|---|------------|-----------|
| Black  | 0   | 1          |           |
| Brown  | 1   | 10         |           |
| Red    | 2   | 100        |           |
| Orange | 3   | 1000       |           |
| Yellow | 4   |            |           |
| Green  | 5   |            |           |
| Blue   | 6   |            |           |
| Violet | 7   |            |           |
| Gray   | 8   |            |           |
| White  | 9   |            |           |
| Silver |   |            | ± 10 %    |
| Gold   | Decimal Point                                 |            | ± 5 %     |

Example for L value less than 10  $\mu\text{H}$   
6.8  $\mu\text{H}$ , ±10 %



Example for L value 10  $\mu\text{H}$  and higher  
270  $\mu\text{H}$ , ±5 %



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REV. 10/11

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Users should verify actual device performance in their specific applications.

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