

## Features

- Formerly *JW.Miller* model
- Current rating up to 1.1 A
- Inductance range: 0.1  $\mu\text{H}$  to 1,000  $\mu\text{H}$
- RoHS compliant\*

## Applications

- DC/DC converters
- Power supplies
- General use

# 8230 Series Conformal Coated RF Choke

### Electrical Specifications (@ 25 °C)

| Bourns Part No. | Inductance        |          | Q<br>Min. | Test<br>Frequency<br>(MHz) | SRF<br>(MHz)<br>Min. | DCR<br>( $\Omega$ )<br>Max. | Idc<br>(mA) | Core<br>Material |
|-----------------|-------------------|----------|-----------|----------------------------|----------------------|-----------------------------|-------------|------------------|
|                 | ( $\mu\text{H}$ ) | Tol. (%) |           |                            |                      |                             |             |                  |
| 8230-94-RC      | 0.10              | $\pm 10$ | 40        | 25                         | 690                  | 0.07                        | 1100        | Phenolic         |
| 8230-96-RC      | 0.12              | $\pm 10$ | 40        | 25                         | 650                  | 0.08                        | 1100        | Phenolic         |
| 8230-00-RC      | 0.15              | $\pm 10$ | 38        | 25                         | 600                  | 0.10                        | 1100        | Phenolic         |
| 8230-02-RC      | 0.18              | $\pm 10$ | 35        | 25                         | 550                  | 0.12                        | 1010        | Phenolic         |
| 8230-04-RC      | 0.22              | $\pm 10$ | 33        | 25                         | 510                  | 0.14                        | 935         | Phenolic         |
| 8230-06-RC      | 0.27              | $\pm 10$ | 33        | 25                         | 430                  | 0.16                        | 875         | Phenolic         |
| 8230-08-RC      | 0.33              | $\pm 10$ | 30        | 25                         | 410                  | 0.20                        | 780         | Phenolic         |
| 8230-10-RC      | 0.39              | $\pm 10$ | 30        | 25                         | 380                  | 0.30                        | 640         | Phenolic         |
| 8230-12-RC      | 0.47              | $\pm 10$ | 30        | 25                         | 340                  | 0.35                        | 590         | Phenolic         |
| 8230-14-RC      | 0.56              | $\pm 10$ | 30        | 25                         | 300                  | 0.50                        | 495         | Phenolic         |
| 8230-16-RC      | 0.68              | $\pm 10$ | 28        | 25                         | 275                  | 0.60                        | 450         | Phenolic         |
| 8230-18-RC      | 0.82              | $\pm 10$ | 28        | 25                         | 250                  | 0.85                        | 380         | Phenolic         |
| 8230-20-RC      | 1.0               | $\pm 10$ | 25        | 25                         | 230                  | 1.00                        | 350         | Phenolic         |
| 8230-22-RC      | 1.2               | $\pm 10$ | 25        | 7.9                        | 150                  | 0.18                        | 825         | Ferrite          |
| 8230-24-RC      | 1.5               | $\pm 10$ | 28        | 7.9                        | 140                  | 0.22                        | 745         | Ferrite          |
| 8230-26-RC      | 1.8               | $\pm 10$ | 30        | 7.9                        | 125                  | 0.30                        | 640         | Ferrite          |
| 8230-28-RC      | 2.2               | $\pm 10$ | 30        | 7.9                        | 115                  | 0.40                        | 550         | Ferrite          |
| 8230-30-RC      | 2.7               | $\pm 10$ | 37        | 7.9                        | 100                  | 0.50                        | 495         | Ferrite          |
| 8230-32-RC      | 3.3               | $\pm 10$ | 45        | 7.9                        | 90                   | 0.85                        | 380         | Ferrite          |
| 8230-34-RC      | 3.9               | $\pm 10$ | 45        | 7.9                        | 82                   | 1.0                         | 350         | Ferrite          |
| 8230-36-RC      | 4.7               | $\pm 10$ | 45        | 7.9                        | 75                   | 1.2                         | 320         | Ferrite          |
| 8230-38-RC      | 5.6               | $\pm 10$ | 50        | 7.9                        | 68                   | 1.8                         | 260         | Ferrite          |
| 8230-40-RC      | 6.8               | $\pm 10$ | 50        | 7.9                        | 60                   | 2.0                         | 245         | Ferrite          |
| 8230-42-RC      | 8.2               | $\pm 10$ | 55        | 7.9                        | 55                   | 2.7                         | 210         | Ferrite          |
| 8230-44-RC      | 10                | $\pm 10$ | 55        | 7.9                        | 50                   | 3.7                         | 180         | Ferrite          |
| 8230-46-RC      | 12                | $\pm 10$ | 45        | 2.5                        | 40                   | 2.7                         | 210         | Ferrite          |
| 8230-48-RC      | 15                | $\pm 10$ | 45        | 2.5                        | 35                   | 2.8                         | 205         | Ferrite          |
| 8230-50-RC      | 18                | $\pm 10$ | 50        | 2.5                        | 32                   | 3.1                         | 195         | Ferrite          |
| 8230-52-RC      | 22                | $\pm 10$ | 50        | 2.5                        | 25                   | 3.3                         | 190         | Ferrite          |
| 8230-54-RC      | 27                | $\pm 10$ | 50        | 2.5                        | 22                   | 3.5                         | 185         | Ferrite          |
| 8230-56-RC      | 33                | $\pm 10$ | 45        | 2.5                        | 24                   | 3.4                         | 187         | Ferrite          |
| 8230-58-RC      | 39                | $\pm 10$ | 45        | 2.5                        | 22                   | 3.6                         | 180         | Ferrite          |
| 8230-60-RC      | 47                | $\pm 10$ | 45        | 2.5                        | 20                   | 4.5                         | 165         | Ferrite          |
| 8230-62-RC      | 56                | $\pm 10$ | 45        | 2.5                        | 18                   | 5.7                         | 145         | Ferrite          |
| 8230-64-RC      | 68                | $\pm 10$ | 50        | 2.5                        | 15                   | 6.7                         | 135         | Ferrite          |
| 8230-66-RC      | 82                | $\pm 10$ | 50        | 2.5                        | 14                   | 7.3                         | 130         | Ferrite          |
| 8230-68-RC      | 100               | $\pm 10$ | 50        | 2.5                        | 13                   | 8.0                         | 125         | Ferrite          |
| 8230-70-RC      | 120               | $\pm 10$ | 30        | 0.79                       | 12                   | 13                          | 97          | Ferrite          |
| 8230-72-RC      | 150               | $\pm 10$ | 30        | 0.79                       | 11                   | 15                          | 85          | Ferrite          |
| 8230-74-RC      | 180               | $\pm 10$ | 30        | 0.79                       | 10                   | 17                          | 79          | Ferrite          |
| 8230-76-RC      | 220               | $\pm 10$ | 30        | 0.79                       | 9.0                  | 21                          | 73          | Ferrite          |
| 8230-78-RC      | 270               | $\pm 10$ | 30        | 0.79                       | 8.0                  | 25                          | 65          | Ferrite          |
| 8230-80-RC      | 330               | $\pm 10$ | 30        | 0.79                       | 4.0                  | 28                          | 62          | Ferrite          |
| 8230-82-RC      | 390               | $\pm 10$ | 30        | 0.79                       | 6.6                  | 35                          | 55          | Ferrite          |
| 8230-84-RC      | 470               | $\pm 10$ | 30        | 0.79                       | 6.0                  | 42                          | 50          | Ferrite          |
| 8230-86-RC      | 560               | $\pm 10$ | 30        | 0.79                       | 5.0                  | 46                          | 48          | Ferrite          |
| 8230-88-RC      | 680               | $\pm 10$ | 30        | 0.79                       | 4.2                  | 60                          | 42          | Ferrite          |
| 8230-90-RC      | 820               | $\pm 10$ | 30        | 0.79                       | 3.8                  | 65                          | 40          | Ferrite          |
| 8230-92-RC      | 1,000             | $\pm 10$ | 30        | 0.79                       | 3.4                  | 72                          | 38          | Ferrite          |

### General Specifications

Temperature Rise .....35 °C at Idc  
 Operating Temperature ..-55 °C to +105 °C  
 Storage Temperature.....-55 °C to +105 °C  
 Dielectric Strength.....500 Vrms

### Materials

Core .....See value table  
 Wire .....Enameled copper  
 Terminal Coating .....Sn  
 Coating .....Epoxy resin  
 Packaging  
 Standard .....1000 pcs. per bag  
 Optional .....5000 pcs. per 14-inch reel

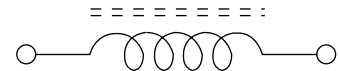
### How To Order

**8230 - 22 - - - RC**

Model \_\_\_\_\_  
 Value Code \_\_\_\_\_  
 (See table)  
 Packaging Code \_\_\_\_\_  
 Blank = 1000 pcs./bag  
 TR = 5000 pcs./14-inch reel  
 Compliance Code \_\_\_\_\_  
 RC = RoHS compliant\*

- Examples:
- 8230-22-RC = 1.20  $\mu\text{H}$  packaged 1000 pcs./bag.
  - 8230-50-TR-RC = 18  $\mu\text{H}$  packaged 5000 pcs./14-inch reel.

### Electrical Schematic

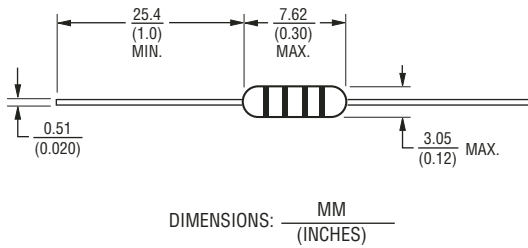


\*RoHS Directive 2002/95/EC Jan 27 2003 including Annex  
 Specifications are subject to change without notice.  
 Customers should verify actual device performance in their specific applications.

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**BOURNS®**

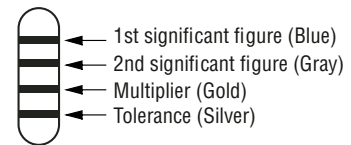
## Product Dimensions



## Typical Part Marking - EIA Color Code

| Color  | 1st & 2nd Significant Figure | Multiplier | Tolerance |
|--------|------------------------------|------------|-----------|
| Silver |                              | 0.01       | ±10 %     |
| Gold   |                              | 0.1        | ±5 %      |
| Black  | 0                            | 1          |           |
| Brown  | 1                            | 10         |           |
| Red    | 2                            | 100        |           |
| Orange | 3                            | 1000       |           |
| Yellow | 4                            |            |           |
| Green  | 5                            |            |           |
| Blue   | 6                            |            |           |
| Violet | 7                            |            |           |
| Gray   | 8                            |            |           |
| White  | 9                            |            |           |

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 %

