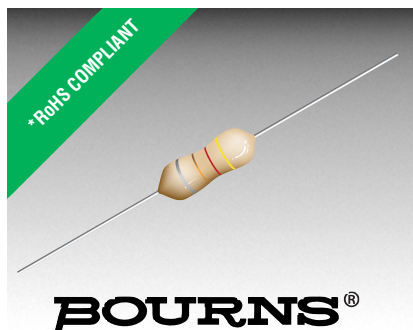




## Features

- Formerly J. W. Miller® model
- Current rating up to 3.3 A
- Inductance range: 1.0  $\mu$ H to 1,000  $\mu$ H
- RoHS compliant\*

## Applications

- DC/DC converters
- Power supplies
- General use

# 5300 Series Conformal Coated RF Choke

## Electrical Specifications (@ 25 °C)

| Bourns Part No. | Inductance |          | Test Frequency | SRF (MHz) Min. | DCR ( $\Omega$ ) Max. | Idc (mA) | Isat (mA) |
|-----------------|------------|----------|----------------|----------------|-----------------------|----------|-----------|
|                 | ( $\mu$ H) | Tol. (%) |                |                |                       |          |           |
| 5300-01-RC      | 1.0        | $\pm 10$ | 7.96 MHz       | 190            | 0.018                 | 3300     | 3000      |
| 5300-02-RC      | 1.2        | $\pm 10$ | 7.96 MHz       | 170            | 0.019                 | 3200     | 2700      |
| 5300-03-RC      | 1.5        | $\pm 10$ | 7.96 MHz       | 160            | 0.020                 | 3100     | 2500      |
| 5300-04-RC      | 1.8        | $\pm 10$ | 7.96 MHz       | 150            | 0.023                 | 2900     | 2100      |
| 5300-05-RC      | 2.2        | $\pm 10$ | 7.96 MHz       | 130            | 0.031                 | 2600     | 2000      |
| 5300-06-RC      | 2.7        | $\pm 10$ | 7.96 MHz       | 120            | 0.033                 | 2500     | 1900      |
| 5300-07-RC      | 3.3        | $\pm 10$ | 7.96 MHz       | 110            | 0.054                 | 1900     | 1700      |
| 5300-08-RC      | 3.9        | $\pm 10$ | 7.96 MHz       | 100            | 0.060                 | 1800     | 1500      |
| 5300-09-RC      | 4.7        | $\pm 10$ | 7.96 MHz       | 86             | 0.068                 | 1700     | 1400      |
| 5300-10-RC      | 5.6        | $\pm 10$ | 7.96 MHz       | 64             | 0.074                 | 1600     | 1300      |
| 5300-11-RC      | 6.8        | $\pm 10$ | 7.96 MHz       | 44             | 0.080                 | 1600     | 1200      |
| 5300-12-RC      | 8.2        | $\pm 10$ | 7.96 MHz       | 32             | 0.087                 | 1500     | 1100      |
| 5300-13-RC      | 10         | $\pm 10$ | 1 KHz          | 25             | 0.095                 | 1500     | 970       |
| 5300-14-RC      | 12         | $\pm 10$ | 1 KHz          | 17             | 0.11                  | 1400     | 880       |
| 5300-15-RC      | 15         | $\pm 10$ | 1 KHz          | 13             | 0.15                  | 1200     | 790       |
| 5300-16-RC      | 18         | $\pm 10$ | 1 KHz          | 10             | 0.16                  | 1100     | 710       |
| 5300-17-RC      | 22         | $\pm 10$ | 1 KHz          | 8.4            | 0.19                  | 1000     | 640       |
| 5300-18-RC      | 27         | $\pm 10$ | 1 KHz          | 8.0            | 0.22                  | 950      | 580       |
| 5300-19-RC      | 33         | $\pm 10$ | 1 KHz          | 7.6            | 0.24                  | 910      | 530       |
| 5300-20-RC      | 39         | $\pm 10$ | 1 KHz          | 7.1            | 0.26                  | 880      | 480       |
| 5300-21-RC      | 47         | $\pm 10$ | 1 KHz          | 6.0            | 0.35                  | 760      | 430       |
| 5300-22-RC      | 56         | $\pm 10$ | 1 KHz          | 5.8            | 0.47                  | 650      | 400       |
| 5300-23-RC      | 68         | $\pm 10$ | 1 KHz          | 4.3            | 0.53                  | 610      | 370       |
| 5300-24-RC      | 82         | $\pm 10$ | 1 KHz          | 4.1            | 0.60                  | 580      | 330       |
| 5300-25-RC      | 100        | $\pm 10$ | 1 KHz          | 3.9            | 0.67                  | 550      | 300       |
| 5300-26-RC      | 120        | $\pm 10$ | 1 KHz          | 3.6            | 0.90                  | 470      | 270       |
| 5300-27-RC      | 150        | $\pm 10$ | 1 KHz          | 3.2            | 1.2                   | 410      | 250       |
| 5300-28-RC      | 180        | $\pm 10$ | 1 KHz          | 2.8            | 1.4                   | 380      | 220       |
| 5300-29-RC      | 220        | $\pm 10$ | 1 KHz          | 2.3            | 1.9                   | 320      | 200       |
| 5300-30-RC      | 270        | $\pm 10$ | 1 KHz          | 2.1            | 2.1                   | 310      | 180       |
| 5300-31-RC      | 330        | $\pm 10$ | 1 KHz          | 1.9            | 2.4                   | 290      | 170       |
| 5300-32-RC      | 390        | $\pm 10$ | 1 KHz          | 1.7            | 3.0                   | 260      | 150       |
| 5300-33-RC      | 470        | $\pm 10$ | 1 KHz          | 1.4            | 3.4                   | 240      | 140       |
| 5300-34-RC      | 560        | $\pm 10$ | 1 KHz          | 1.3            | 4.7                   | 210      | 130       |
| 5300-35-RC      | 680        | $\pm 10$ | 1 KHz          | 1.2            | 6.4                   | 180      | 110       |
| 5300-36-RC      | 820        | $\pm 10$ | 1 KHz          | 1.1            | 7.1                   | 170      | 100       |
| 5300-37-RC      | 1000       | $\pm 10$ | 1 KHz          | 1.0            | 7.9                   | 160      | 95        |
| 5300-38-RC      | 1200       | $\pm 10$ | 1 KHz          | 0.94           | 9.0                   | 150      | 87        |
| 5300-39-RC      | 1500       | $\pm 10$ | 1 KHz          | 0.76           | 12                    | 130      | 78        |
| 5300-40-RC      | 1800       | $\pm 10$ | 1 KHz          | 0.72           | 14                    | 120      | 71        |
| 5300-41-RC      | 2200       | $\pm 10$ | 1 KHz          | 0.64           | 19                    | 100      | 64        |
| 5300-42-RC      | 2700       | $\pm 10$ | 1 KHz          | 0.56           | 25                    | 90       | 58        |
| 5300-43-RC      | 3300       | $\pm 10$ | 1 KHz          | 0.53           | 29                    | 83       | 52        |
| 5300-44-RC      | 3900       | $\pm 10$ | 1 KHz          | 0.48           | 34                    | 77       | 48        |
| 5300-45-RC      | 4700       | $\pm 10$ | 1 KHz          | 0.45           | 37                    | 74       | 44        |
| 5300-46-RC      | 5600       | $\pm 10$ | 1 KHz          | 0.40           | 50                    | 63       | 40        |
| 5300-47-RC      | 6800       | $\pm 10$ | 1 KHz          | 0.36           | 58                    | 59       | 36        |
| 5300-48-RC      | 8200       | $\pm 10$ | 1 KHz          | 0.29           | 68                    | 54       | 33        |
| 5300-49-RC      | 10,000     | $\pm 10$ | 1 KHz          | 0.27           | 75                    | 52       | 30        |

## General Specifications

Temperature Rise ..... 35 °C at Idc  
 Rated Current  
 ..... Inductance drop 5 % typical at Isat  
 Operating Temperature  
 ..... -55 °C to +105 °C  
 Storage Temperature  
 ..... -55 °C to +105 °C  
 Dielectric Strength ..... 500 Vrms

## Materials

Core ..... Ferrite  
 Wire ..... Enameled copper  
 Terminal Coating ..... Sn  
 Coating ..... Epoxy resin  
 Packaging  
 Standard ..... 500 pcs. per bag  
 Optional ..... 3000 pcs. per 14-inch reel

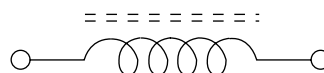
## How to Order

Model **5300 - 02 - - RC**  
 Value Code  
 (See table)  
 Packaging Code  
 Blank = 500 pcs./bag  
 TR = 3000 pcs./14-inch reel  
 Compliance Code  
 RC = RoHS compliant\*

### Examples:

- 5300-02-RC = 1.2 mH packaged 500 pcs./bag.
- 5300-16-TR-RC = 18 mH packaged 3000 pcs./14-inch reel.

## Electrical Schematic

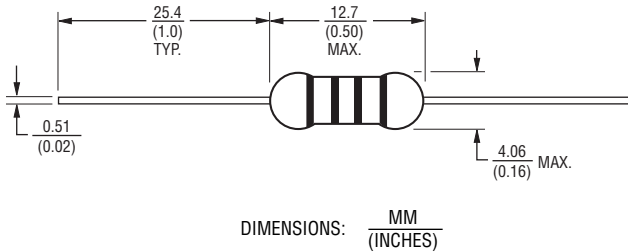


\*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.  
 Specifications are subject to change without notice.  
 Customers should verify actual device performance in their specific applications.

## 5300 Series Conformal Coated RF Choke

**BOURNS®**

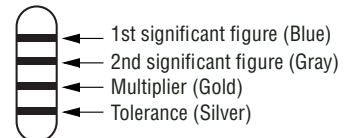
### Product Dimensions



### Typical Part Marking - EIA Color Code

| 1st & 2nd Significant Figure |        | Multiplier | Tolerance |
|------------------------------|--------|------------|-----------|
| Color                        | Figure |            |           |
| 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 6.8  $\mu\text{H}$ , ±10 %



Example for 270  $\mu\text{H}$ , ±10 %

