

# DRC-0406

## Radial Coil Inductors

The DRC-0406 Series is the first of four new inductor series of Signal's line of unshielded radial drum chokes which are also known as fixed or bobbin core inductors. These through hole mount components are commonly used for general purpose filtering of high frequency signals and mitigating EMI/RFI. They frequently make their appearance in a wide variety of applications such as industrial, consumer, and medical products.

Utilizing the latest winding technology, copper windings and ferrite cores, Signal's DRC Series addresses the needs of modern filtering applications by providing the most effective electrical noise suppression via a combination of high impedance, large inductance, and elevated current capacity.



### General Features

- Low cost
- Wide inductance range
- Small mounting space required
- Excellent characteristics for high Q
- Low DCR
- High current
- Tape packaging for auto-insertion

### Specifications

- Inductance Range: 1.2  $\mu$ H to 2200  $\mu$ H
- Rated Current : It is either the inductance is 10% lower than its initial value in DC Saturation characteristics or temperature rise becomes  $\Delta T = 20^{\circ}\text{C}$  ( $T_a = 20^{\circ}\text{C}$ ), whichever is lower.
- Operating Temperature Range:  $-20^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$
- Storage Temperature Range (component):  $-40^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$

### Applications

- TV and Audio equipment
- Telecommunication devices
- Personal computers
- Switching power supplies
- Other noise filters

PRODUCT IDENTIFICATION

**DRC - 0406 - 470 J - UL - TR**

**Type / Product Series**  
DRC = Radial Drum Core Inductors

**Core Size**  
0406 = OD = 4 mm, L = 6 mm

**Inductance \***  
470 = 47  $\mu$ H

**Inductance Tolerance**  
J =  $\pm 5\%$   
K =  $\pm 10\%$   
M =  $\pm 20\%$

**Packaging**  
TR = Tape & Reel  
No code = Bulk

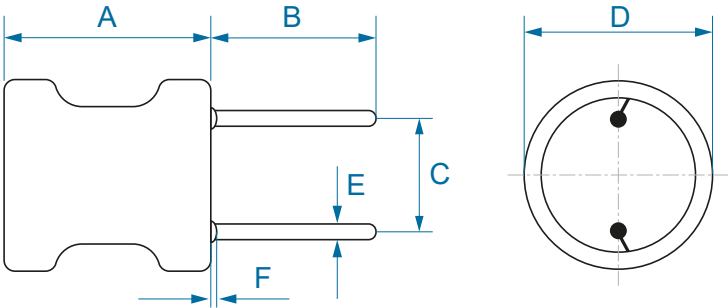
**Sleeve**  
UL = UL Tape (black)  
No code = No Sleeve

\* Note: Expressed by three figures. The unit is micro henry ( $\mu$ H). The first and second figures are significant digits, the third figure expresses the number of zeros which follow the two figures.  
If there is a decimal point, it is expressed by the capital letter "R" (3R8 = 3.8  $\mu$ H). In that case, all figures are significant digits.

MECHANICAL SPECIFICATIONS

Dimensions are in mm.

| SERIES   | A   | B<br>Min | C             | D<br>Max | E<br>$\pm 0.05$ |
|----------|-----|----------|---------------|----------|-----------------|
| DRC-0406 | 8.0 | 15.0     | 2.0 $\pm$ 0.5 | 5.5      | 0.55            |



Custom versions available upon request.



128 Atlantic Avenue, Lynbrook, NY 11563  
Toll Free 866-239-5777 | Tel 516-239-5777 | Fax 516-239-7208  
sales@signaltransformer.com | techhelp@signaltransformer.com  
[belfuse.com/signal](https://belfuse.com/signal)

## ELECTRICAL SPECIFICATIONS

Electrical specifications for all part numbers measured at 25°C unless stated otherwise.

## DRC-0406 SERIES

| Part Number      | L<br>@ 1 kHz<br>( $\mu$ H) | Q<br>Min. | Q<br>Test Freq.<br>(MHz) | SRF<br>Min.<br>(MHz) | DCR<br>Max.<br>( $\Omega$ ) | Rated Current<br>Max<br>(mA) |
|------------------|----------------------------|-----------|--------------------------|----------------------|-----------------------------|------------------------------|
| DRC-0406-1R2J-UL | 1.2                        | 100       | 7.96                     | 120                  | 0.058                       | 1950                         |
| DRC-0406-3R3J-UL | 3.3                        | 100       | 7.96                     | 75                   | 0.130                       | 1500                         |
| DRC-0406-470J-UL | 47                         | 70        | 2.52                     | 7.8                  | 0.76                        | 550                          |
| DRC-0406-101J-UL | 100                        | 45        | 0.796                    | 6.0                  | 1.0                         | 400                          |
| DRC-0406-151J-UL | 150                        | 65        | 0.796                    | 4.2                  | 1.3                         | 350                          |
| DRC-0406-331J-UL | 330                        | 50        | 0.796                    | 2.2                  | 2.2                         | 250                          |
| DRC-0406-471J-UL | 470                        | 50        | 0.796                    | 1.7                  | 3.6                         | 200                          |
| DRC-0406-681J-UL | 680                        | 50        | 0.796                    | 1.3                  | 4.6                         | 170                          |
| DRC-0406-102J-UL | 1000                       | 90        | 0.252                    | 1.0                  | 6.7                         | 150                          |
| DRC-0406-152J-UL | 1500                       | 80        | 0.252                    | 0.8                  | 13                          | 120                          |
| DRC-0406-222J-UL | 2200                       | 80        | 0.252                    | 0.8                  | 17                          | 100                          |

- Characteristics**

$I_{sat}$  (Saturation Current): The value of inductance decrease within 10%

$I_{rms}$  (Temperature Rise): The temperature of coil increases within 20°C.

- Test equipment**

**L&Q:** measured on HP 4285A or HP 4284A

**DCR:** measured on Chroma 16502 milli-ohm meter

**SRF:** HM 9461 L-SRF meter

Electrical specifications at 25°C

- Notice**

There could be measurement deviations with different instruments due to different test principles / internal resistance.

Open and Short compensation is performed before testing

**Custom versions available upon request.**

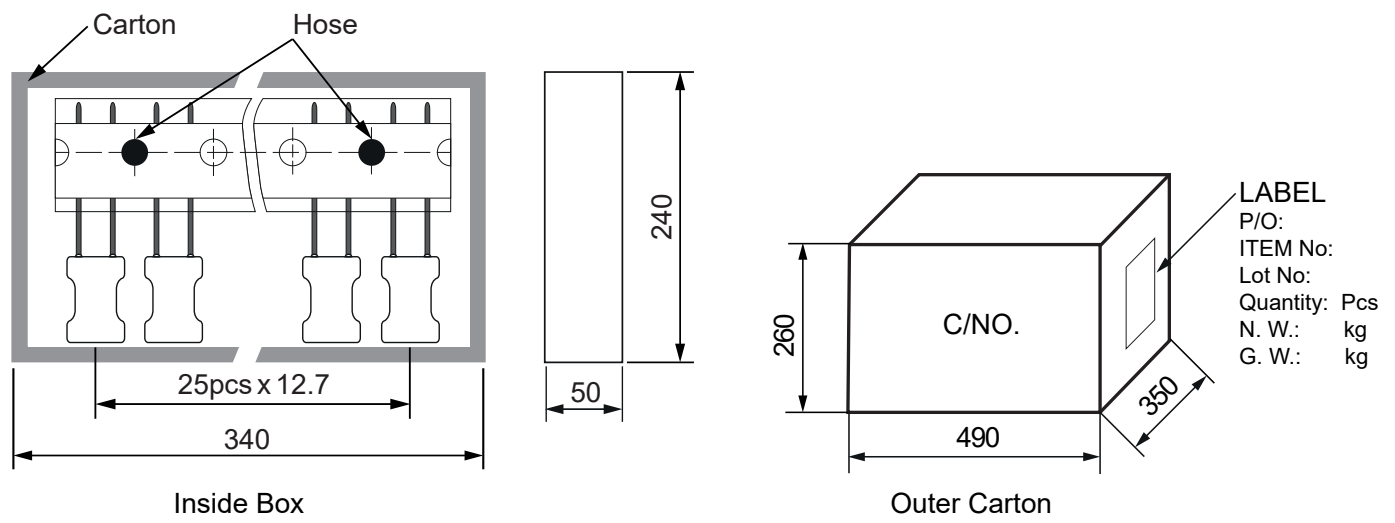


128 Atlantic Avenue, Lynbrook, NY 11563  
Toll Free 866-239-5777 | Tel 516-239-5777 | Fax 516-239-7208  
sales@signaltransformer.com | techhelp@signaltransformer.com

[belfuse.com/signal](https://belfuse.com/signal)

PACKAGING SPECIFICATIONS

Dimension unit : mm



| Series   | Packaging Quantity (pcs) |              |
|----------|--------------------------|--------------|
|          | Inside box               | Outer carton |
| DRC-0406 | 1000                     | 10000        |

- **Storage Conditions**
  - a) Temperature and humidity conditions < 35°C and < 35 - 65 %
  - b) Recommendations: Inductors should be used within 6 months from the time of delivery
  - c) Packaging material should be kept away from where chlorine and sulfur exist

Custom versions available upon request.



128 Atlantic Avenue, Lynbrook, NY 11563  
Toll Free 866-239-5777 | Tel 516-239-5777 | Fax 516-239-7208  
sales@signaltransformer.com | techhelp@signaltransformer.com

[belfuse.com/signal](http://belfuse.com/signal)

## About Signal Transformer

Signal Transformer is known as the world's leader of wire wound magnetic solutions since 1959. With over 50 years of experience manufacturing transformers, chokes, inductors and custom or modified standard products. Signal offers not only the most comprehensive line of certified standard power conversion products, with our vast engineering, manufacturing and regulatory resources; Signal Transformer excels in the design and manufacturer of cost effective, specialized platforms.



**For more information,  
please contact us:**

128 Atlantic Avenue  
Lynbrook, NY 11563

**Toll Free +1 866-239-5777**

Tel +1 516-239-5777

Fax +1 516-239-7208

sales@signaltransformer.com  
techhelp@signaltransformer.com



**belfuse.com/signal**