DRC-0608
DRC-0707
DRC-0807

Radial Coil Inductors

The DRC-0608, DRC-0707, DRC-0807 Series further expands Signal's new inductor series 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

- Wide inductance range
- Lowest DCR
- Tape packaging for auto-insertion
- Shrink tubing protected winding
- Fixed lead spacing
- High peak current support
- Large saturation current capacity
- Small footprint

Specifications

- Inductance Range: 3.3 μH to 47000 μH
- Rated Current : It is either the inductance is 10% lower than its initial value in DC Saturation characteristics or temperature rise becomes ΔT = 20°C (Ta = 20°C), whichever is lower.
- Operating Temperature Range: -20°C to +85°C
- Storage Temperature Range (component): -40°C to +125°C

Applications

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

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REACH COMPLIANCE

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PRODUCT IDENTIFICATION

DRC - 0608 - 470 K - UL

Type / Product Series
DRC = Radial Drum Core Inductors

Core Size
0608 = OD = 6 mm, L = 8 mm
0707 = OD = 7 mm, L = 7 mm
0807 = OD = 8 mm, L = 7 mm

Inductance *
470 = 47 µH

* Note: Expressed by three figures. The unit is micro henry (µH). 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 µH). In that case, all figures are significant digits.

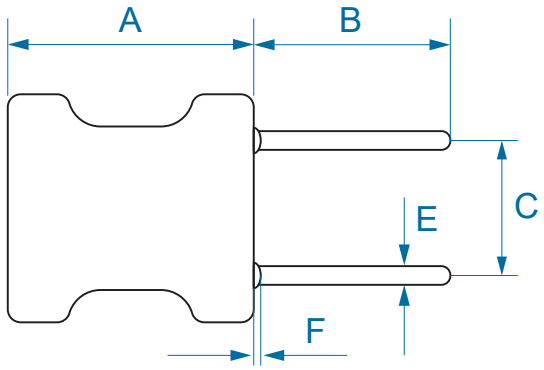
Sleeve
UL = UL Tape (black)
No code = No Sleeve

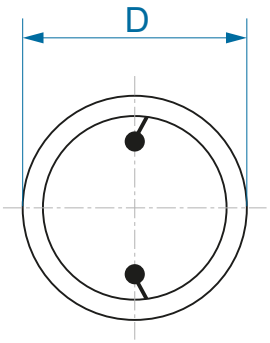
Inductance Tolerance
J = ±5%
K = ±10%
M = ±20%

MECHANICAL SPECIFICATIONS

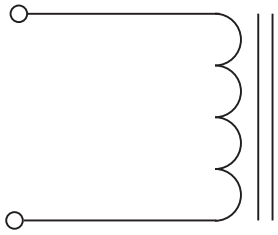
Dimensions are in mm.

SERIES	A	B Min	C	D Max	E ± 0.05
DRC-0608	11.0	15.0	2.5 ± 0.5	7.5	0.65
DRC-0707	9.5	15.0	5.0 ± 1.0	8.5	0.65
DRC-0807	9.5	15.0	5.0 ± 1.0	10.0	0.65





SCHEMATIC



Custom versions available upon request.

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ELECTRICAL SPECIFICATIONS

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

DRC-0608 SERIES

Part Number	L @ 1 kHz (µH)	Q Min.	Q Test Freq. (MHz)	DCR Max. (Ω)	Rated Current Max (mA)
DRC-0608-4R7J-UL	4.7	20	7.96	0.020	3000
DRC-0608-100J-UL	10	30	2.52	0.039	2000
DRC-0608-220K-UL	22	30	2.52	0.062	1400
DRC-0608-330K-UL	33	30	2.52	0.10	1100
DRC-0608-470K-UL	47	30	2.52	0.15	950
DRC-0608-101J-UL	100	20	0.796	0.35	650
DRC-0608-221J-UL	220	20	0.796	0.90	440
DRC-0608-471J-UL	470	20	0.796	1.80	300
DRC-0608-222J-UL	2200	70	0.252	6.8	140
DRC-0608-332J-UL	3300	70	0.252	10.5	115
DRC-0608-472J-UL	4700	70	0.252	13.6	95
DRC-0608-822J-UL	8200	70	0.252	25.2	70
DRC-0608-103J-UL	10000	70	0.0796	29.5	65
DRC-0608-223J-UL	22000	50	0.0796	80.0	45
DRC-0608-333J-UL	33000	50	0.0796	98.5	35
DRC-0608-473J-UL	47000	50	0.0796	160	30

Note: Rated Current is the I_{sat} (Saturation Current) or the I_{rms} (Temperature Rise Current). Whichever value is lower.

DRC-0707 SERIES

Part Number	L @ 1 kHz (µH)	Q Min.	Q Test Freq. (MHz)	SRF Min. (MHz)	DCR Max. (Ω)	Saturation Current Max (A)	Temperature Rise Current Max (A)
DRC-0707-100K-UL	10	20	2.52	19	0.043	2.1	1.9
DRC-0707-150K-UL	15	20	2.52	15	0.056	1.7	1.6
DRC-0707-331J-UL	330	20	0.796	2.5	1.10	0.36	0.37

DRC-0807 SERIES

Part Number	L @ 1 kHz (µH)	Q Min.	Q Test Freq. (MHz)	SRF Min. (MHz)	DCR Max. (Ω)	Saturation Current Max (A)	Temperature Rise Current Max (A)
DRC-0807-3R3M-UL	3.3	10	7.96	38	0.013	3.8	3.4
DRC-0807-100K-UL	10	20	2.52	19	0.031	2.5	2.2
DRC-0807-150J-UL	15	20	2.52	15	0.042	2.0	1.9
DRC-0807-220J-UL	22	20	2.52	12	0.070	1.6	1.5
DRC-0807-471J-UL	470	10	0.796	2.3	1.0	0.34	0.39
DRC-0807-681J-UL	680	10	0.796	1.9	1.5	0.28	0.32

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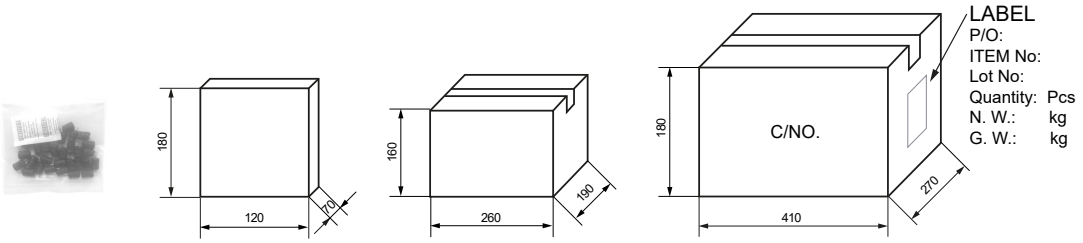
- **Characteristics**
  I_{sat} (Saturation Current): The value of inductance decrease within 10%
  I_{rms} (Temperature Rise): The temperature of coil increases within 20°C.

- **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

IN BAG PACKAGING SPECIFICATIONS



Small Box Inside Box Outside Carton

Series	Packaging Quantity (pcs)			
	Bag	Small box	Inside box	Outside carton
DRC-0608	200	1000	4000	8000
DRC-0707	200	1000	4000	8000
DRC-0807	100	500	2000	4000

- **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

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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.

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