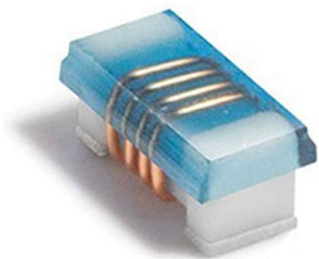


# 0603DC-R15XGRW Datasheet

[www.digi-electronics.com](http://www.digi-electronics.com)



<https://www.DiGi-Electronics.com>

DiGi Electronics Part Number	0603DC-R15XGRW-DG
Manufacturer	<a href="#">Coilcraft</a>
Manufacturer Product Number	0603DC-R15XGRW
Description	FIXED IND 150NH 520MA 1.05OHM SM
Detailed Description	150 nH Unshielded Drum Core, Wirewound Inductor 520 mA 1.05Ohm Max 0603 (1608 Metric)



Tel: +00 852-30501935

RFQ Email: [Info@DiGi-Electronics.com](mailto:Info@DiGi-Electronics.com)

DiGi is a global authorized distributor of electronic components.

## Purchase and inquiry

Manufacturer Product Number:

0603DC-R15XGRW

Series:

0603DC

Type:

Drum Core, Wirewound

Inductance:

150 nH

Current Rating (Amps):

520 mA

Shielding:

Unshielded

Q @ Freq:

47 @ 900MHz

Ratings:

AEC-Q200

Inductance Frequency - Test:

150 MHz

Mounting Type:

Surface Mount

Supplier Device Package:

0603

Height - Seated (Max):

0.035" (0.89mm)

Manufacturer:

Coilcraft

Product Status:

Active

Material - Core:

Ceramic

Tolerance:

±2%

Current - Saturation (Isat):

-

DC Resistance (DCR):

1.050hm Max

Frequency - Self Resonant:

1.1GHz

Operating Temperature:

-40°C ~ 125°C

Features:

-

Package / Case:

0603 (1608 Metric)

Size / Dimension:

0.067" L x 0.039" W (1.70mm x 0.99mm)

## Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8504.50.8000

Moisture Sensitivity Level (MSL):

1 (Unlimited)

ECCN:

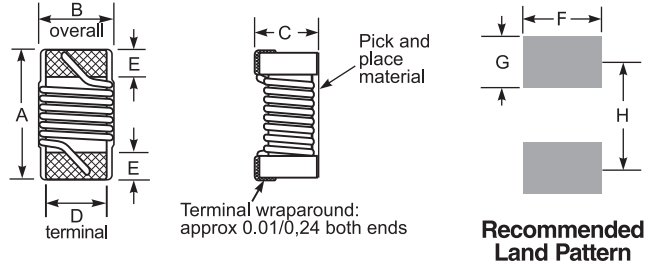
EAR99





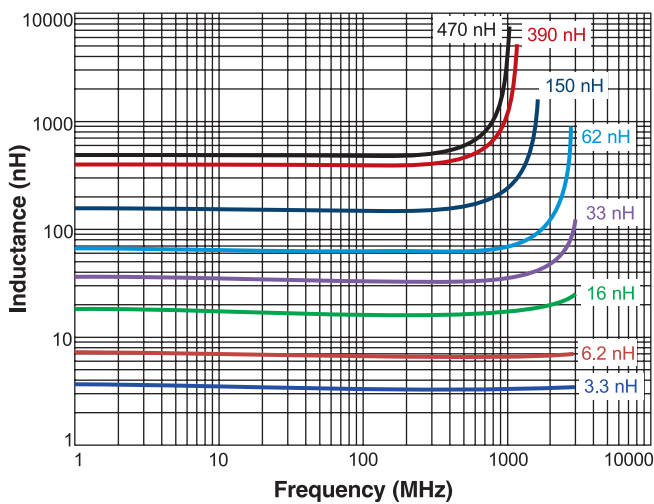
# Chip Inductors - 0603DC Series (1608)

- 0603 ceramic wirewound chip inductor
- 45 inductance values available from 2.7 nH to 470 nH
- High SRF – as high as 11.4 GHz
- AEC-Q200 Grade 1 (-40°C to +125°C)



A max	B max	C max	D	E	F	G	H	
0.067	0.039	0.035	0.028	0.013	0.033	0.016	0.051	inches
1,70	0,99	0,89	0,71	0,33	0,85	0,40	1,29	mm

## Typical L vs Frequency



**Core material** Ceramic

**Environmental** RoHS compliant without exemption, halogen free

**Terminations** RoHS compliant matte tin over nickel over silver-glass frit.

**Weight** 3 – 4 mg

**Ambient temperature** -40°C to +125°C with Irms current

**Maximum part temperature** +140°C (ambient + temp rise).

**Storage temperature** Component: -40°C to +140°C.

Tape and reel packaging: -40°C to +80°C

**Resistance to soldering heat** Max three 40 second reflows at +260°C, parts cooled to room temperature between cycles

**Temperature Coefficient of Inductance (TCL)** +25 to +125 ppm/°C

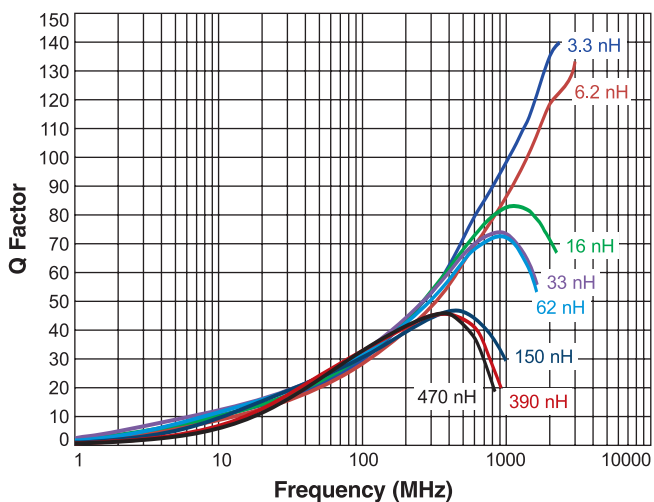
**Moisture Sensitivity Level (MSL)** 1 (unlimited floor life at <30°C / 85% relative humidity)

**Packaging** 2000 per 7" reel; 5000/10000 per 13" reel;

Paper tape: 8 mm wide, 0.95 mm thick, 4 mm pocket spacing

**PCB washing** Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787\\_PCB\\_Washing.pdf](#).

## Typical Q vs Frequency



# 0603DC Series (1608)

Designer's Kit C487 contains 44 each of all 5% values  
 Designer's Kit C487-2 contains 44 each of all 2% values

Part number <sup>1</sup>	Inductance <sup>2</sup> (nH)	Percent tolerance <sup>3</sup>	900	1.7	2.4	SRF	DCR	I <sub>rms</sub> (mA)		
			MHz Q typ <sup>4</sup>	GHz Q typ <sup>4</sup>	GHz Q typ <sup>4</sup>	typ <sup>5</sup> (GHz)	max <sup>6</sup> (Ohms)	25°C <sup>7</sup>	85°C <sup>8</sup>	125°C <sup>9</sup>
0603DC-1N6X_R_	1.6 @ 250 MHz	<b>5</b>	44	71	112	14.90	0.026	3670	1300	1100
0603DC-2N7X_R_	2.7 @ 250 MHz	<b>5, 3</b>	80	117	148	11.40	0.029	3340	2100	1700
0603DC-3N3X_R_	3.3 @ 250 MHz	<b>5, 3, 2</b>	94	125	140	9.30	0.042	2770	1700	1400
0603DC-3N9X_R_	3.9 @ 250 MHz	<b>5, 3, 2</b>	105	144	177	11.25	0.040	2800	2100	1390
0603DC-4N3X_R_	4.3 @ 250 MHz	<b>5, 3, 2</b>	100	138	167	10.60	0.040	2800	2100	1390
0603DC-5N1X_R_	5.1 @ 250 MHz	<b>5, 3, 2</b>	88	126	152	7.50	0.046	2650	2100	1350
0603DC-5N6X_R_	5.6 @ 250 MHz	<b>5, 3, 2</b>	90	129	187	6.30	0.046	2650	2100	1350
0603DC-6N2X_R_	6.2 @ 250 MHz	<b>5, 3, 2</b>	84	110	125	6.60	0.048	2580	2100	1330
0603DC-6N8X_R_	6.8 @ 250 MHz	<b>5, 3, 2</b>	100	131	143	5.10	0.048	2580	2100	1330
0603DC-7N5X_R_	7.5 @ 250 MHz	<b>5, 3, 2</b>	88	126	160	5.20	0.053	2450	2100	1250
0603DC-8N2X_R_	8.2 @ 250 MHz	<b>5, 3, 2</b>	93	130	162	6.25	0.053	2450	2100	1250
0603DC-9N1X_R_	9.1 @ 250 MHz	<b>5, 3, 2</b>	97	117	112	4.50	0.060	2260	2040	1160
0603DC-10NX_R_	10 @ 250 MHz	<b>5, 3, 2</b>	92	107	98	4.10	0.060	2260	2040	1160
0603DC-11NX_R_	11 @ 250 MHz	<b>5, 3, 2</b>	94	132	157	4.25	0.065	2170	1960	1110
0603DC-12NX_R_	12 @ 250 MHz	<b>5, 3, 2</b>	94	122	145	3.90	0.065	2170	1960	1110
0603DC-15NX_R_	15 @ 250 MHz	<b>5, 3, 2</b>	87	92	91	3.50	0.074	2040	1840	1050
0603DC-16NX_R_	16 @ 250 MHz	<b>5, 3, 2</b>	82	77	64	3.40	0.074	2040	1840	1050
0603DC-18NX_R_	18 @ 250 MHz	<b>5, 3, 2</b>	80	72	50	2.95	0.078	2000	1800	1000
0603DC-20NX_R_	20 @ 250 MHz	<b>5, 3, 2</b>	80	70	55	3.70	0.084	1920	1730	980
0603DC-22NX_R_	22 @ 250 MHz	<b>5, 3, 2</b>	88	84	56	2.70	0.095	1750	1590	900
0603DC-27NX_R_	27 @ 250 MHz	<b>5, 3, 2</b>	82	67	40	2.50	0.116	1630	1450	830
0603DC-30NX_R_	30 @ 250 MHz	<b>5, 3, 2</b>	77	69	41	3.00	0.103	1730	1560	900
0603DC-33NX_R_	33 @ 250 MHz	<b>5, 3, 2</b>	74	53	—	2.25	0.124	1550	1380	760
0603DC-36NX_R_	36 @ 250 MHz	<b>5, 3, 2</b>	79	67	—	2.35	0.134	1490	1320	740
0603DC-39NX_R_	39 @ 250 MHz	<b>5, 3, 2</b>	73	56	—	2.15	0.163	1350	1200	680
0603DC-43NX_R_	43 @ 250 MHz	<b>5, 3, 2</b>	82	74	—	2.10	0.176	1300	1150	620
0603DC-47NX_R_	47 @ 200 MHz	<b>5, 3, 2</b>	73	50	—	2.00	0.200	1200	1080	590
0603DC-51NX_R_	51 @ 200 MHz	<b>5, 3, 2</b>	77	57	—	1.95	0.216	1170	1020	570
0603DC-56NX_R_	56 @ 200 MHz	<b>5, 3, 2</b>	72	48	—	1.85	0.260	1030	920	490
0603DC-62NX_R_	62 @ 200 MHz	<b>5, 3, 2</b>	73	50	—	2.00	0.312	970	850	460
0603DC-68NX_R_	68 @ 200 MHz	<b>5, 3, 2</b>	63	—	—	1.65	0.372	890	790	420
0603DC-75NX_R_	75 @ 150 MHz	<b>5, 3, 2</b>	62	—	—	1.60	0.396	860	760	400
0603DC-82NX_R_	82 @ 150 MHz	<b>5, 3, 2</b>	66	—	—	1.55	0.424	830	740	390
0603DC-91NX_R_	91 @ 150 MHz	<b>5, 3, 2</b>	64	—	—	1.45	0.576	710	630	330
0603DC-R10X_R_	100 @ 150 MHz	<b>5, 3, 2</b>	62	—	—	1.35	0.707	625	555	290
0603DC-R11X_R_	110 @ 150 MHz	<b>5, 3, 2</b>	55	—	—	1.25	0.725	620	550	270
0603DC-R12X_R_	120 @ 150 MHz	<b>5, 3, 2</b>	52	—	—	1.20	0.765	600	520	260
0603DC-R13X_R_	130 @ 150 MHz	<b>5, 3, 2</b>	50	—	—	1.15	0.804	590	510	250
0603DC-R15X_R_	150 @ 150 MHz	<b>5, 3, 2</b>	47	—	—	1.10	1.05	520	450	220
0603DC-R18X_R_	180 @ 100 MHz	<b>5, 3, 2</b>	44	—	—	1.00	1.39	440	390	190
0603DC-R22X_R_	220 @ 100 MHz	<b>5, 3, 2</b>	—	—	—	0.90	1.69	390	340	160
0603DC-R27X_R_	270 @ 100 MHz	<b>5, 3, 2</b>	—	—	—	0.85	2.06	360	300	140
0603DC-R30X_R_	300 @ 100 MHz	<b>5, 3, 2</b>	—	—	—	0.75	2.66	320	270	120
0603DC-R33X_R_	330 @ 100 MHz	<b>5, 3, 2</b>	—	—	—	0.70	2.93	300	250	110
0603DC-R39X_R_	390 @ 100 MHz	<b>5, 3, 2</b>	—	—	—	0.65	3.92	260	220	90
0603DC-R47X_R_	470 @ 100 MHz	<b>5, 3, 2</b>	—	—	—	0.60	5.40	220	170	70

1. When ordering, please specify **tolerance** and **packaging** codes:

### 0603DC-R47XJRW

**Tolerance:** **G** = 2% **H** = 3% **J** = 5%

(Table shows stock values and tolerances in bold.)

**Packaging:** **W** = 7" machine-ready reel. EIA-481 punched paper tape (2000 parts per full reel). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer (\$25 charge).

**Q** = 13" machine-ready reel. EIA-481 punched paper tape. Factory order only, not stocked (5000 parts per full reel).

**Y** = 13" machine-ready reel. EIA-481 punched paper tape. Factory order only, not stocked (10000 parts per full reel).

2. Inductance measured using a Coilcraft SMD-A fixture in an Agilent/HP E4982A impedance analyzer with Coilcraft-provided correlation pieces.

3. Tolerances in bold are stocked for immediate shipment.

4. Q measured using an Agilent/HP 4991A with an Agilent/HP 16197 test fixture.

5. SRF measured using an Agilent/HP 5071C/8722ES network analyzer and a Coilcraft SMD-D/CCF 1052 test fixture.

6. DCR measured on a micro-ohmmeter and a Coilcraft CCF1010/A test fixture.

7. Current that cause 40°C rise at 25°C.

8. Maximum current that can be applied at 85°C.

9. Maximum current that can be applied at 125°C.

10. Electrical specifications at 25°C.

Refer to Doc 362 "Soldering Surface Mount Components" before soldering.



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