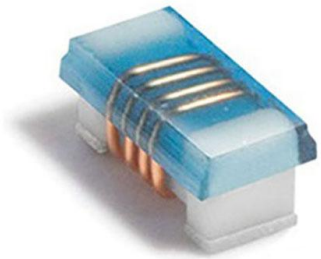
0603DC-R33XGRW Datasheet



DiGi Electronics Part Number	0603DC-R33XGRW-DG
Manufacturer	Coilcraft
Manufacturer Product Number	0603DC-R33XGRW
Description	FIXED IND 330NH 300MA 2.93OHM SM
Detailed Description	330 nH Unshielded Drum Core, Wirewound Inductor 300 mA 2.93Ohm Max 0603 (1608 Metric)

Tel: +00 852-30501935

RFQ Email: Info@DiGi-Electronics.com

Purchase and inquiry

Manufacturer Product Number:	Manufacturer:
0603DC-R33XGRW	Coilcraft
Series:	Product Status:
0603DC	Active
Type:	Material - Core:
Drum Core, Wirewound	Ceramic
Inductance:	Tolerance:
330 nH	±2%
Current Rating (Amps):	Current - Saturation (Isat):
300 mA	-
Shielding:	DC Resistance (DCR):
Unshielded	2.93Ohm Max
Q @ Freq:	Frequency - Self Resonant:
-	700MHz
Ratings:	Operating Temperature:
AEC-Q200	-40°C ~ 125°C
Inductance Frequency - Test:	Features:
100 MHz	-
Mounting Type:	Package / Case:
Surface Mount	0603 (1608 Metric)
Supplier Device Package:	Size / Dimension:
0603	0.067" L x 0.039" W (1.70mm x 0.99mm)
Height - Seated (Max):	
0.035" (0.89mm)	

Environmental & Export classification

RoHS Status:	Moisture Sensitivity Level (MSL):
ROHS3 Compliant	1 (Unlimited)
REACH Status:	ECCN:
REACH Unaffected	EAR99
HTSUS:	
8504.50.8000	

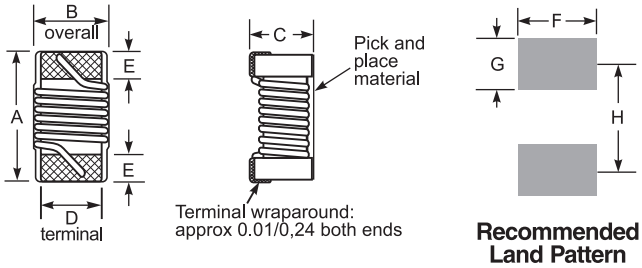
RoHS/ REACH COMPLIANT

Halogen Free

AEC Q200 +125°C

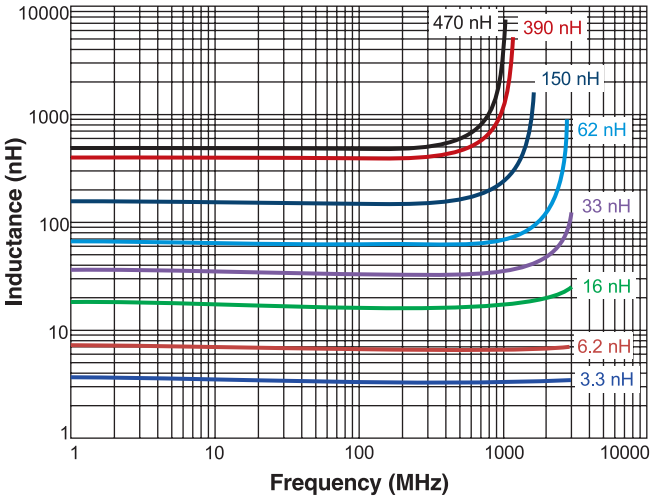
Chip Inductors - 0603DC Series (1608)

- 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)

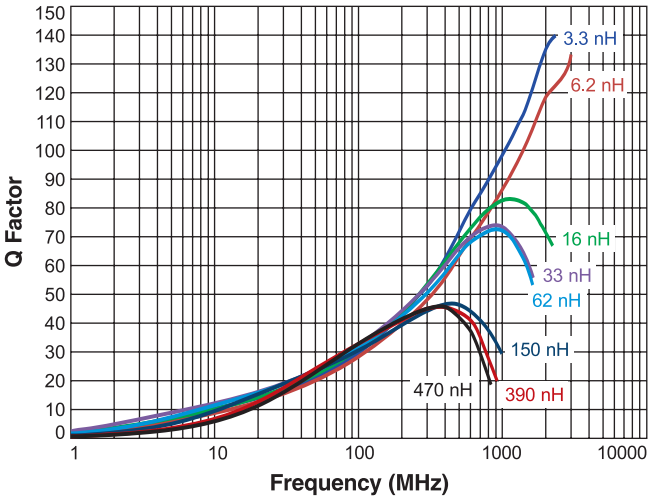


A max	B max	C max	D	E	F	G	H	
0.067	0.039	0.035	0.028	0.013	0.033	0.016	0.051	inches
1,70	0,99	0,89	0,71	0,33	0,85	0,40	1,29	mm

Typical L vs Frequency



Typical Q 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.

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RoHS/ REACH COMPLIANT

Halogen Free

AEC Q200 +125°C

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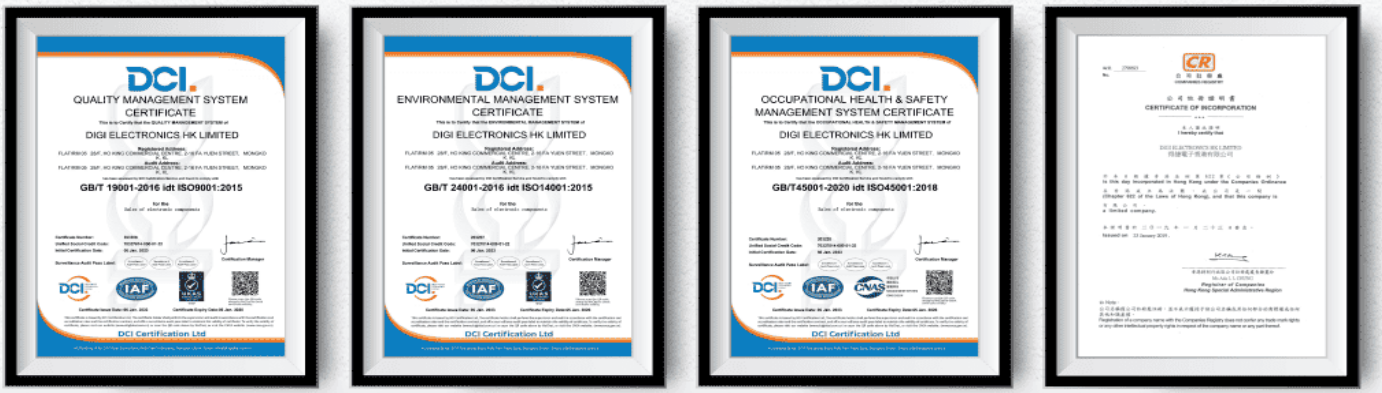

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