NEW!

RoHS/ REACH COMPLIANT

Halogen Free

AEC Q200 +125°C
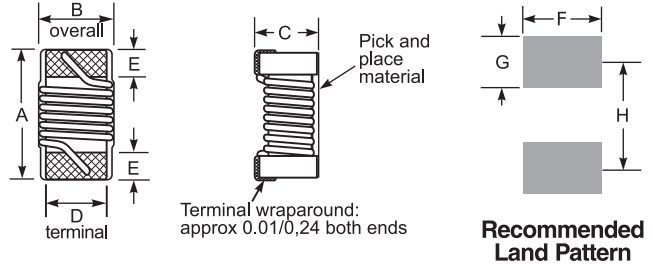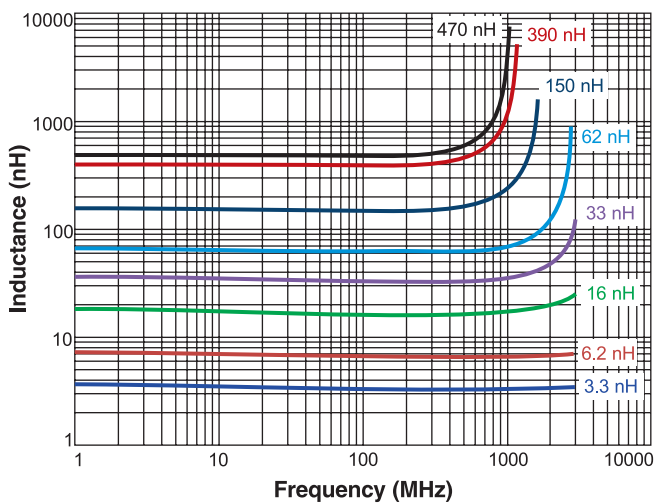
Chip Inductors - 0603DC Series (1608)

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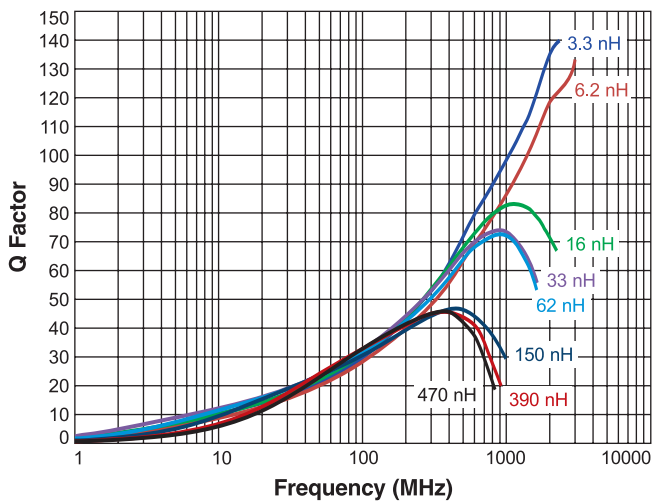- High SRF – as high as 11.4 GHz
- AEC-Q200 Grade 1 (–40°C to +125°C)

B overall
A
E
E
D terminal

C
Pick and place material
Terminal wraparound: approx 0.01/0,24 both ends

F
G
H
Recommended Land Pattern

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

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 L vs Frequency

Typical Q vs Frequency

Coilcraft

www.coilcraft.com

0603DC Series (1608)

Designer's Kit C487 contains 43 each of all 5% values
Designer's Kit C487-2 contains 43 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]	Irms (mA) 85°C[8]	Irms (mA) 125°C[9]
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.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Coilcraft:

0603DC-10NXJRW 0603DC-11NXJRW 0603DC-R47XJRW 0603DC-R18XJRW 0603DC-R22XJRW 0603DC-R27XJRW 0603DC-R30XJRW 0603DC-R33JRW 0603DC-R39XJRW 0603DC-9N1XJRW 0603DC-R10XJRW 0603DC-R11XJRW 0603DC-R12XJRW 0603DC-R13XJRW 0603DC-R15XJRW 0603DC-6N8XJRW 0603DC-75NXJRW 0603DC-7N5XJRW 0603DC-82NXJRW 0603DC-8N2XJRW 0603DC-91NXJRW 0603DC-56NXJRW 0603DC-5N1XJRW 0603DC-5N6XJRW 0603DC-62NXJRW 0603DC-68NXJRW 0603DC-6N2XJRW 0603DC-3N3XJRW 0603DC-3N9XJRW 0603DC-43NJRW 0603DC-47NXJRW 0603DC-4N3XJRW 0603DC-51NXJRW 0603DC-27NXJRW 0603DC-2N7XJRW 0603DC-30NXJRW 0603DC-33NXJRW 0603DC-36NXJRW 0603DC-39NXJRW 0603DC-12NXJRW 0603DC-15NXJRW 0603DC-16NXJRW 0603DC-18NXJRW 0603DC-20NXJRW 0603DC-22NXJRW 0603DC-43NXJRW 0603DC-R33XJRW 0603DC-10NXGRW 0603DC-11NXGRW 0603DC-12NXGRW 0603DC-15NXGRW 0603DC-16NXGRW 0603DC-18NXGRW 0603DC-20NXGRW 0603DC-22NXGRW 0603DC-27NXGRW 0603DC-30NXGRW 0603DC-33NXGRW 0603DC-36NXGRW 0603DC-39NXGRW 0603DC-3N3XGRW 0603DC-3N9XGRW 0603DC-43NXGRW 0603DC-47NXGRW 0603DC-4N3XGRW 0603DC-51NXGRW 0603DC-56NXGRW 0603DC-5N1XGRW 0603DC-5N6XGRW 0603DC-62NXGRW 0603DC-68NXGRW 0603DC-6N2XGRW 0603DC-6N8XGRW 0603DC-75NXGRW 0603DC-7N5XGRW 0603DC-82NXGRW 0603DC-8N2XGRW 0603DC-91NXGRW 0603DC-9N1XGRW 0603DC-R10XGRW 0603DC-R11XGRW 0603DC-R12XGRW 0603DC-R13XGRW 0603DC-R15XGRW 0603DC-R18XGRW 0603DC-R22XGRW 0603DC-R27XGRW 0603DC-R30XGRW 0603DC-R33XGRW 0603DC-R39XGRW 0603DC-R47XGRW