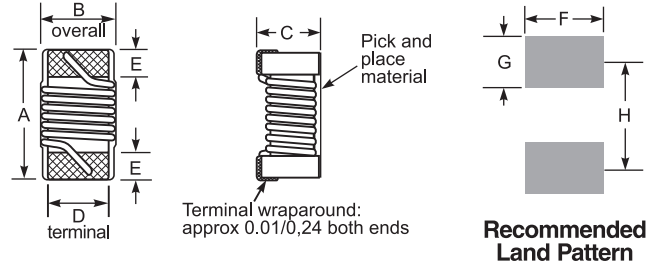


NEW!

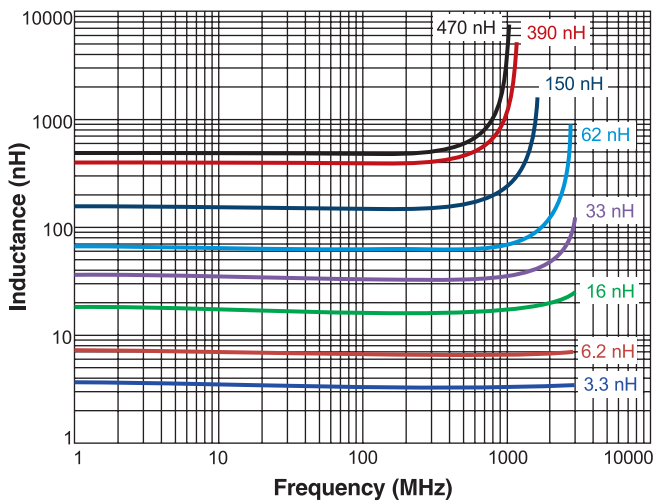
Chip Inductors - 0603DC Series (1608)



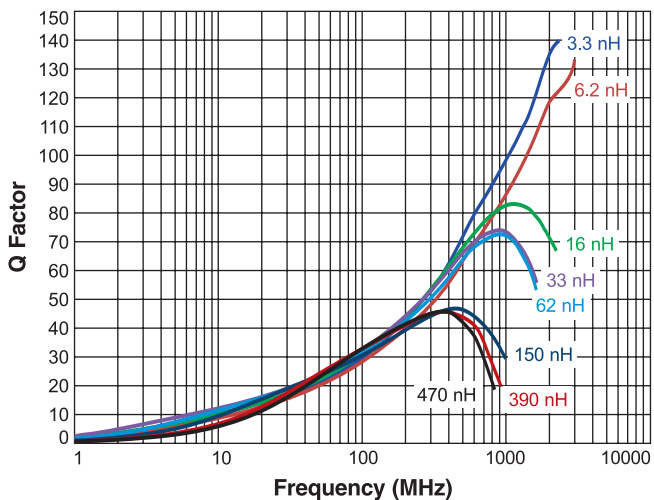
- 0603 ceramic wirewound chip inductor
- 45 inductance values available from 2.7 nH to 470 nH
- High SRF – as high as 11.4 GHz
- AEC-Q200 Grade 1 (–40°C to +125°C)



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-platinum-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)

Mean Time Between Failures (MTBF) 1 billion hours

Packaging 2000 per 7" 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](#).



0603DC Series (1608)

Part number ¹	Inductance ² (nH)	Percent tolerance ³	900 MHz	1.7 GHz	2.4 GHz	SRF typ ⁵ (GHz)	DCR max ⁶ (Ohms)	Irms (mA)		
			Q typ ⁴	Q typ ⁴	Q typ ⁴			25°C ⁷	85°C ⁸	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.



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Document 1605-2 Revised 10/21/20

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