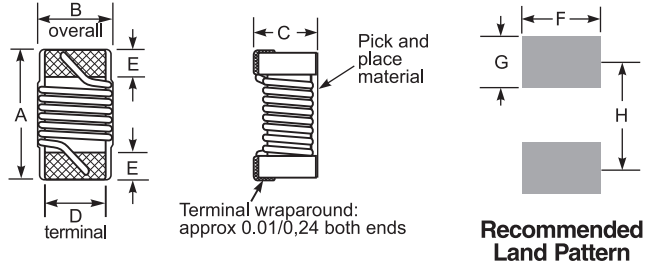


NEW!

Chip Inductors - 0603DC Series (1608)

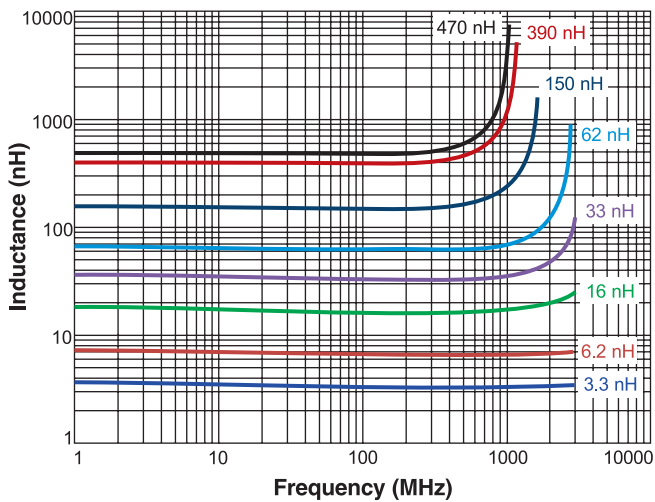


- 0603 ceramic wirewound chip inductor
- 43 inductance values available from 2.7 nH to 470 nH
- High SRF – as high as 11.4 GHz
- AEC-Q200 Grade 1 (–40°C to +125°C)

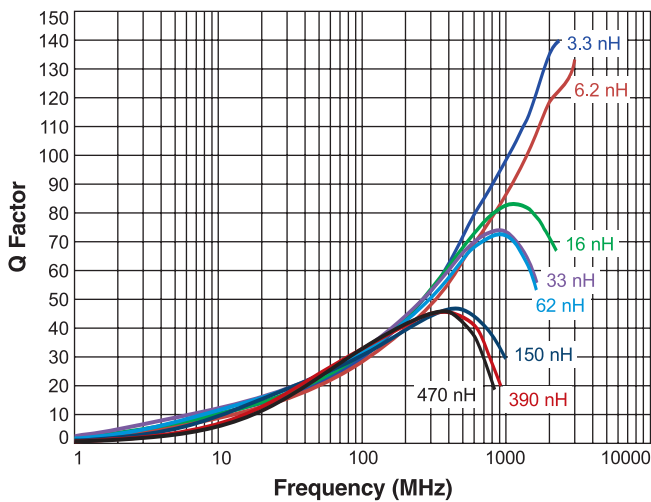


A max	B max	C max	D	E	F	G	H	
0.067	0.039	0.035	0.028	0.013	0.033	0.016	0.051	inches
1,70	0,99	0,89	0,71	0,33	0,85	0,40	1,29	mm

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-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; 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	L 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)	I _{rms} (mA)		
								25°C ⁷	85°C ⁸	125°C ⁹
0603DC-2N7X_RW	2.7	5, 3	80	117	148	11.40	0.029	3340	2100	1700
0603DC-3N3X_RW	3.3	5, 3, 2	94	125	140	9.30	0.042	2770	1700	1400
0603DC-3N9X_RW	3.9	5, 3, 2	105	144	177	11.25	0.040	2800	2100	1390
0603DC-4N3X_RW	4.3	5, 3, 2	100	138	167	10.60	0.040	2800	2100	1390
0603DC-5N1X_RW	5.1	5, 3, 2	88	126	152	7.50	0.046	2650	2100	1350
0603DC-6N2X_RW	6.2	5, 3, 2	84	110	125	6.60	0.048	2580	2100	1330
0603DC-6N8X_RW	6.8	5, 3, 2	100	131	143	5.10	0.048	2580	2100	1330
0603DC-7N5X_RW	7.5	5, 3, 2	88	126	160	5.20	0.053	2450	2100	1250
0603DC-8N2X_RW	8.2	5, 3, 2	93	130	162	6.25	0.053	2450	2100	1250
0603DC-9N1X_RW	9.1	5, 3, 2	97	117	112	4.50	0.060	2260	2040	1160
0603DC-10NX_RW	10	5, 3, 2	92	107	98	4.10	0.060	2260	2040	1160
0603DC-11NX_RW	11	5, 3, 2	94	132	157	4.25	0.065	2170	1960	1110
0603DC-12NX_RW	12	5, 3, 2	94	122	145	3.90	0.065	2170	1960	1110
0603DC-15NX_RW	15	5, 3, 2	87	92	91	3.50	0.074	2040	1840	1050
0603DC-16NX_RW	16	5, 3, 2	82	77	64	3.40	0.074	2040	1840	1050
0603DC-18NX_RW	18	5, 3, 2	80	72	50	2.95	0.078	2000	1800	1000
0603DC-20NX_RW	20	5, 3, 2	80	70	55	3.70	0.084	1920	1730	980
0603DC-22NX_RW	22	5, 3, 2	88	84	56	2.70	0.095	1750	1590	900
0603DC-27NX_RW	27	5, 3, 2	82	67	40	2.50	0.116	1630	1450	830
0603DC-30NX_RW	30	5, 3, 2	77	69	41	3.00	0.103	1730	1560	900
0603DC-33NX_RW	33	5, 3, 2	74	53	—	2.25	0.124	1550	1380	760
0603DC-36NX_RW	36	5, 3, 2	79	67	—	2.35	0.134	1490	1320	740
0603DC-39NX_RW	39	5, 3, 2	73	56	—	2.15	0.163	1350	1200	680
0603DC-43NX_RW	43	5, 3, 2	82	74	—	2.10	0.176	1300	1150	620
0603DC-47NX_RW	47	5, 3, 2	73	50	—	2.00	0.200	1200	1080	590
0603DC-51NX_RW	51	5, 3, 2	77	57	—	1.95	0.216	1170	1020	570
0603DC-56NX_RW	56	5, 3, 2	72	48	—	1.85	0.260	1030	920	490
0603DC-62NX_RW	62	5, 3, 2	73	50	—	2.00	0.312	970	850	460
0603DC-68NX_RW	68	5, 3, 2	63	—	—	1.65	0.372	890	790	420
0603DC-75NX_RW	75	5, 3, 2	62	—	—	1.60	0.396	860	760	400
0603DC-82NX_RW	82	5, 3, 2	66	—	—	1.55	0.424	830	740	390
0603DC-91NX_RW	91	5, 3, 2	64	—	—	1.45	0.576	710	630	330
0603DC-R11X_RW	110	5, 3, 2	55	—	—	1.25	0.725	620	550	270
0603DC-R12X_RW	120	5, 3, 2	52	—	—	1.20	0.765	600	520	260
0603DC-R13X_RW	120	5, 3, 2	50	—	—	1.15	0.804	590	510	250
0603DC-R15X_RW	150	5, 3, 2	47	—	—	1.10	1.050	520	450	220
0603DC-R18X_RW	180	5, 3, 2	44	—	—	1.00	1.390	440	390	190
0603DC-R22X_RW	220	5, 3, 2	—	—	—	0.90	1.690	390	340	160
0603DC-R27X_RW	270	5, 3, 2	—	—	—	0.85	2.06	360	300	140
0603DC-R30X_RW	300	5, 3, 2	—	—	—	0.75	2.66	320	270	120
0603DC-R33X_RW	330	5, 3, 2	—	—	—	0.70	2.93	300	250	110
0603DC-R39X_RW	390	5, 3, 2	—	—	—	0.65	3.92	260	220	90
0603DC-R47X_RW	470	5, 3, 2	—	—	—	0.60	5.40	220	170	70

1. When ordering, please specify **tolerance** code:

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).

2. Inductance measured at 250 MHz 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 04/20/20

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