Chip Inductors – 0603HL Series (1608)

RoHS/ REACH COMPLIANT

Halogen Free

- Higher inductance values than other 0603 inductors
- Inductance range: 330 nH – 3.3 µH

Part number[1]	Inductance[2] ±5% (nH)	Q typ[3]	SRF typ[4] (MHz)	DCR max[5] (Ohms)	Irms[6] (mA)	Color code[7]
0603HL-331XJR_	330 @ 25 MHz	13 @ 25 MHz	420	0.970	330	Violet
0603HL-391XJR_	390 @ 25 MHz	13 @ 25 MHz	400	1.05	330	Gray
0603HL-471XJR_	470 @ 25 MHz	12 @ 25 MHz	200	1.15	300	White
0603HL-511XJR_	510 @ 25 MHz	12 @ 25 MHz	340	1.20	300	Black
0603HL-561XJR_	560 @ 25 MHz	12 @ 25 MHz	330	1.35	300	Brown
0603HL-681XJR_	680 @ 25 MHz	12 @ 25 MHz	310	1.80	260	Red
0603HL-821XJR_	820 @ 25 MHz	14 @ 25 MHz	290	2.45	190	Orange
0603HL-102XJR_	1000 @ 25 MHz	14 @ 25 MHz	250	2.80	190	Yellow
0603HL-122XJR_	1200 @ 25 MHz	14 @ 25 MHz	230	3.20	180	Green
0603HL-152XJR_	1500 @ 25 MHz	15 @ 25 MHz	190	4.10	150	Blue
0603HL-182XJR_	1800 @ 25 MHz	16 @ 25 MHz	180	5.30	140	Violet
0603HL-222XJR_	2200 @ 25 MHz	16 @ 25 MHz	165	5.90	130	Gray
0603HL-272XJR_	2700 @ 25 MHz	16 @ 25 MHz	150	7.00	120	White
0603HL-332XJR_	3300 @ 25 MHz	18 @ 25 MHz	135	9.10	110	Black

1. When ordering, please specify **termination** and **packaging** code:

   0603HL-332XJRC

   Termination: **R** = RoHS compliant matte tin over nickel over silver-platinum-glass frit
   Special order: **Q** = RoHS tin-silver-copper (95.5/4/0.5) or **P** = non-RoHS tin-lead (63/37). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer ($25 charge).

   Packaging: **C** = 7″ machine-ready reel. EIA-481 embossed plastic tape (2000 parts per full reel).
   B = Less than full reel. In an effort to simplify our part numbering system, Coilcraft is eliminating the need for multiple packaging codes. When ordering, simply change the last letter of your part number from B to C.
2. Inductance measured at 0.1 Vrms, using a Coilcraft SMD-A fixture in Agilent/HP 4287A impedance analyzer or equivalent with Coilcraft-provided correlation pieces.
3. Q measured using a Coilcraft SMD-A fixture in Agilent/HP 4287A impedance analyzer or equivalent.
4. SRF measured using Agilent/HP 8753D network analyzer with Coilcraft SMD-D test fixture.
5. DCR measured on Cambridge Technology Micro-ohmmeter or equivalent.
6. Current that causes a 15°C temperature rise from 25°C ambient. This information is for reference only and does not represent absolute maximum ratings.
7. Each part is marked with a single dot. The color dots are not unique identifiers and correspond to multiple inductance values.
8. Electrical specifications at 25°C.

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

Designer's Kit C449 contains 10 of each value

Core material Ceramic

Environmental RoHS compliant without exemption, halogen free

Terminations RoHS compliant matte tin over nickel over silver-platinum-glass frit. Other terminations available at additional cost.

Weight 3.2 – 4.4 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 & 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) +50 to +150 ppm/°C

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

Failures in Time (FIT) / Mean Time Between Failures (MTBF)
0.22 per billion hours / 4.55E+09 hours, calculated per Telcordia SR-332

Packaging 2000 per 7″ reel. Plastic tape: 8 mm wide, 0.23 mm thick, 4 mm pocket spacing, 1.0 mm pocket depth

PCB washing Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See Doc787_PCB_Washing.pdf.

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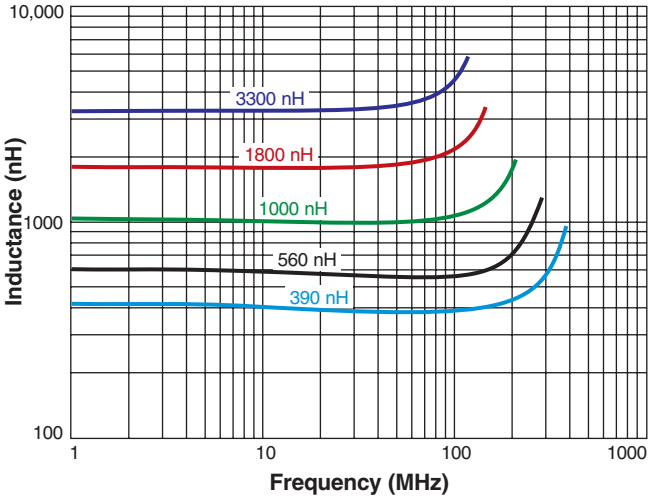
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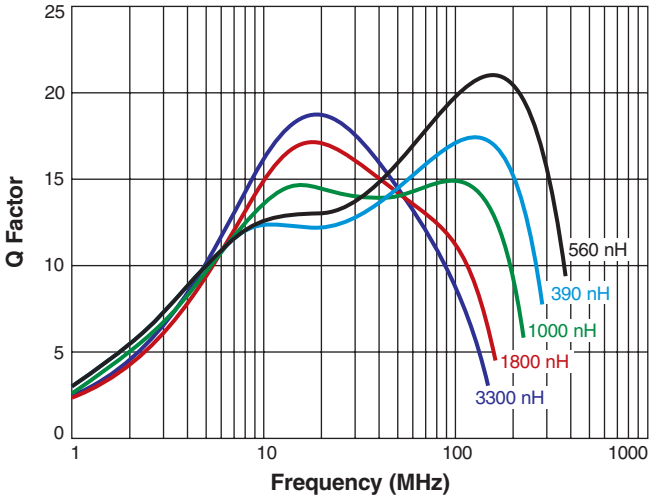
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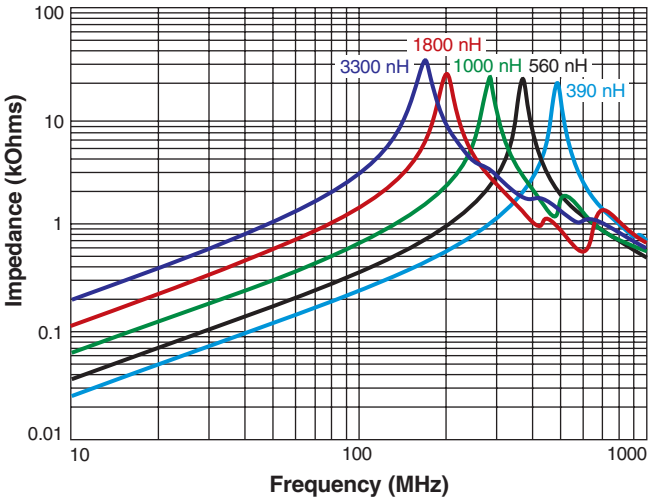
Typical L vs Frequency

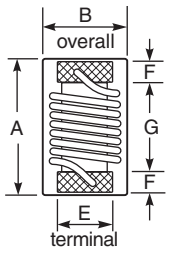


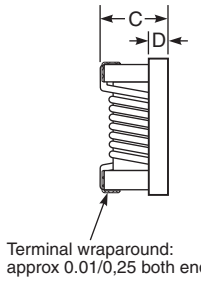
Typical Q vs Frequency

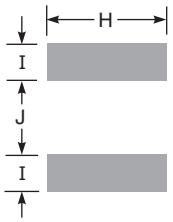


Typical Impedance vs Frequency









Recommended Land Pattern

A max	B max	C max	D	E	F	G	H	I	J	
0.071	0.047	0.037	0.010	0.030	0.011	0.038	0.040	0.025	0.025	inches
1,80	1,19	0,94	0,25	0,76	0,28	0,97	1,02	0,64	0,64	mm

Note: Height dimension (C) is before optional solder application. For maximum height dimension including solder, add 0.006 in / 0,152 mm.

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