HIGH CURRENT

Chip Inductors – 0603HC (1608)

With their high current ratings and ultra-small size, these chip inductors are ideal for today's high frequency, low voltage applications like mobile phones. They feature continuous current ratings up to 2.4 Amps DC and will handle transient currents up to 50% higher. At low inductance values, their Q factors are also higher than our 0603CS Series.

Part number[1]	Inductance[2] (nH)	Percent tolerance[3]	Q min[4]	900 MHz L typ	900 MHz Q typ	1.7 GHz L typ	1.7 GHz Q typ	SRF min[5] (MHz)	DCR max[6] (Ohms)	Irms[7] (A)	Color code
0603HC-1N6XJL_	1.6	**5**	24	1.67	49	1.65	63	12500	0.030	2.4	Black
0603HC-3N6XJL_	3.6	**5**	24	3.65	70	3.75	90	5900	0.048	2.3	Brown
0603HC-3N9XJL_	3.9	**5**	25	3.74	70	3.90	90	5900	0.054	2.2	Red
0603HC-6N8XJL_	6.8	**5**	35	6.72	70	7.10	75	5800	0.054	2.1	Orange
0603HC-7N5XJL_	7.5	**5**	38	7.33	70	7.90	68	3700	0.059	2.1	Yellow
0603HC-10NX_L_	10	**5,2**	38	9.70	73	10.5	57	3700	0.071	2.0	Green
0603HC-12NX_L_	12	**5,2**	38	12.3	68	14.5	41	3000	0.075	2.0	Blue
0603HC-15NX_L_	15	**5,2**	38	15.5	65	17.6	40	2800	0.080	1.9	Violet
0603HC-18NX_L_	18	**5,2**	40	19.5	62	25.0	40	2800	0.099	1.9	Gray
0603HC-22NX_L_	22	**5,2**	42	24.0	61	31.5	26	2400	0.099	1.8	White
0603HC-24NX_L_	24	**5,2**	42	25.8	55	35.0	21	2400	0.105	1.8	Black
0603HC-33NXJL_	33	**5**	47	34.3	50	—	—	1900	0.175	0.95	Brown
0603HC-47NXJL_	47	**5**	40	49.5	45	—	—	1530	0.195	0.85	Red

1. When ordering, specify **tolerance, termination** and **packaging** codes:

0603HC-24NXJLW

Tolerance: **G** = 2% **J** = 5% (Table shows stock tolerances in bold.)

Termination: **L** = RoHS compliant silver-palladium-platinum-glass frit.
E = Halogen free component. RoHS compliant silver-palladium-platinum-glass frit terminations. Special order: **T** = RoHS tin-silver-copper (95.5/4/0.5) or **S** = non-RoHS tin-lead (63/37).

Packaging: **W** = 7″ machine-ready reel. EIA-481 punched paper tape (2000 parts per full reel).
U = Less than full reel. In tape, but not machine ready. To have a leader and trailer added ($25 charge), use code letter W instead.

2. Inductance measured at 250 MHz using Coilcraft SMD-A fixture in Agilent/HP 4286 impedance analyzer with Coilcraft-provided correlation pieces.
3. Tolerances in bold are stocked for immediate shipment.
4. Q measured at 250 MHz using Agilent/HP 4291A with Agilent/HP 16193 test fixture.
5. SRF measured using Agilent/HP 8720D network analyzer and Coilcraft SMD-D test fixture.
6. DCR measured on micro-ohmmeter and Coilcraft CCF858 test fixture.
7. Current that causes a 20°C temperature rise from 25°C ambient.
8. Electrical specifications at 25°C.

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

Designer's Kit C339 contains 10 of each of all 5% parts

Core material Ceramic

Environmental RoHS compliant, halogen free optional

Terminations RoHS compliant silver-palladium-platinum-glass frit.

Weight 3.3 – 3.7 mg

Ambient temperature –40°C to +125°C with Irms current, +125°C to +145°C with derated current

Storage temperature Component: –40°C to +145°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)

Failures in Time (FIT) / Mean Time Between Failures (MTBF) One per billion hours / one billion hours, calculated per Telcordia SR-332

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

PCB washing Tested with pure water or alcohol only. For other solvents, see Doc787_PCB_Washing.pdf.

COILCRAFT ACCURATE REPEATABLE PRECISION MEASUREMENTS SEE WEB SITE TEST FIXTURES

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HIGH CURRENT

0603HC (1608) Chip Inductors

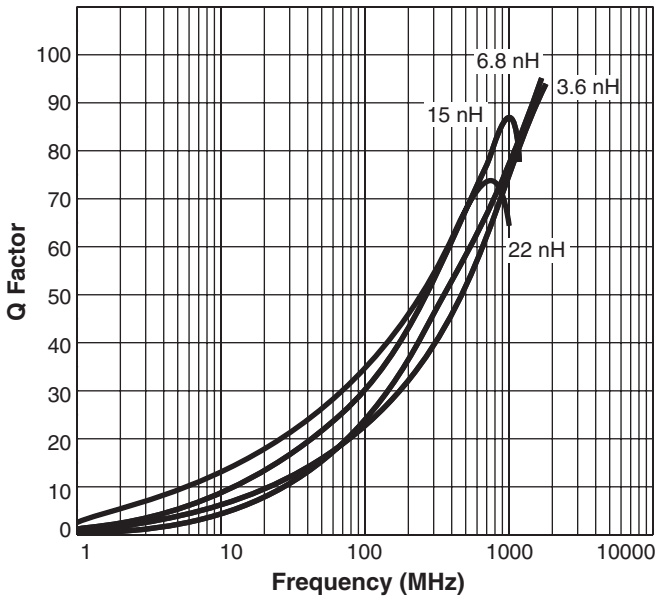
S-Parameter files
ON OUR WEB SITE

SPICE models
ON OUR WEB SITE

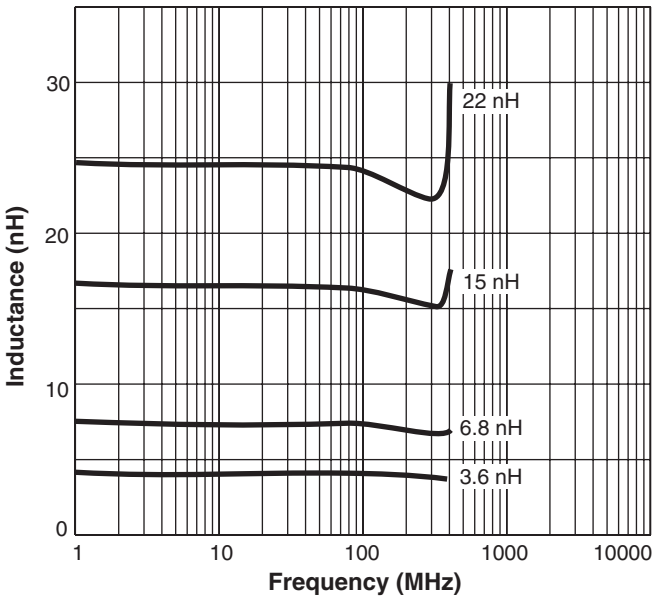
RoHS COMPLIANT

Halogen Free OPTION

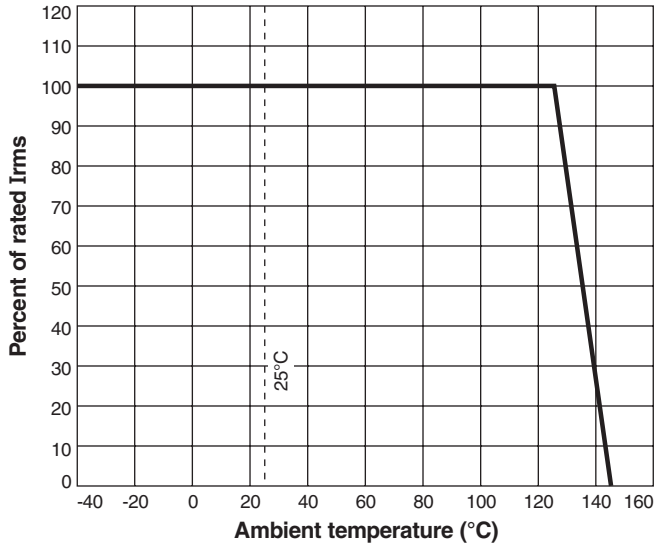
Typical Q vs Frequency

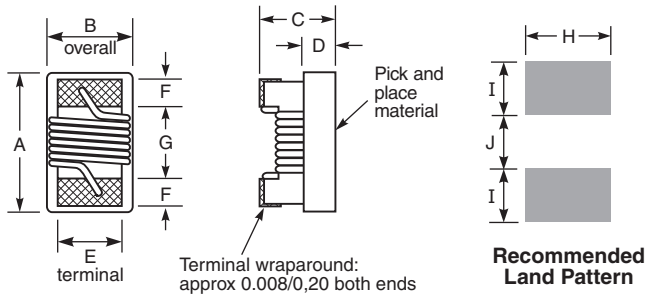


Typical L vs Frequency



Irms Derating





A max	B max	C max	D ref	E	F	G	H	I	J	
0.071	0.044	0.040	0.015	0.030	0.013	0.034	0.040	0.025	0.025	inches
1,80	1,12	1,02	0,38	0,76	0,33	0,86	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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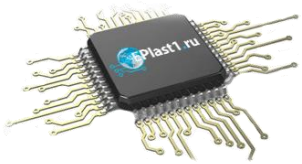
Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits,General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

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