

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		1.7 GHz		SRF min ⁵ (MHz)	DCR max ⁶ (Ohms)	Irms ⁷ (A)	Color code
				L typ	Q typ	L typ	Q typ				
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.

- Inductance measured at 250 MHz using Coilcraft SMD-A fixture in Agilent/HP 4286 impedance analyzer with Coilcraft-provided correlation pieces.
 - Tolerances in bold are stocked for immediate shipment.
 - Q measured at 250 MHz using Agilent/HP 4291A with Agilent/HP 16193 test fixture.
 - SRF measured using Agilent/HP 8720D network analyzer and Coilcraft SMD-D test fixture.
 - DCR measured on micro-ohmmeter and Coilcraft CCF858 test fixture.
 - Current that causes a 20°C temperature rise from 25°C ambient.
 - 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
PRECISION REPEATABLE
MEASUREMENTS
SEE WEB SITE **TEST FIXTURES**



www.coilcraft.com

US +1-847-639-6400 sales@coilcraft.com
UK +44-1236-730595 sales@coilcraft-europe.com
Taiwan +886-2-2264 3646 sales@coilcraft.com.tw
China +86-21-6218 8074 sales@coilcraft.com.cn
Singapore +65-6484 8412 sales@coilcraft.com.sg

Document 218-1 Revised 09/30/13

© Coilcraft Inc. 2013

This product may not be used in medical or high risk applications without prior Coilcraft approval. Specification subject to change without notice. Please check web site for latest information.

HIGH CURRENT

0603HC (1608) Chip Inductors

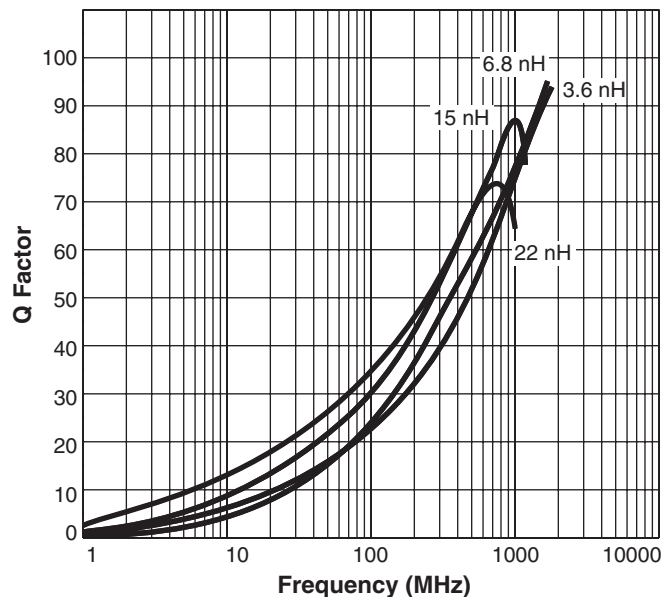
S-Parameter files

ON OUR WEB SITE

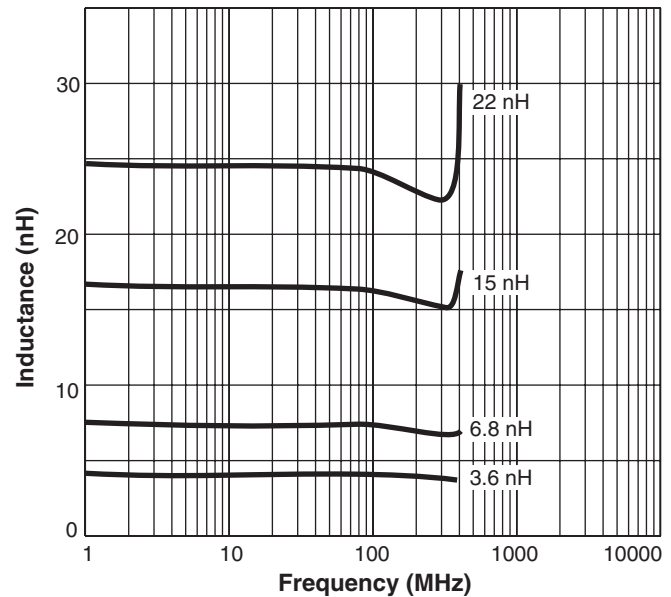
SPICE models

ON OUR WEB SITE

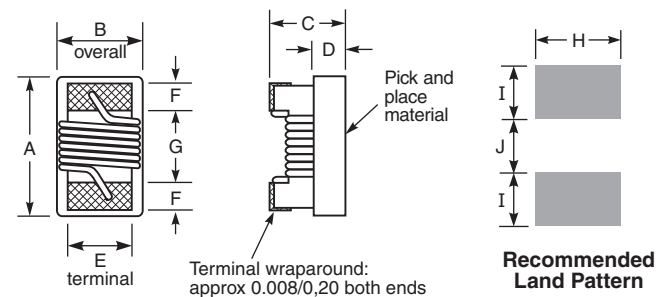
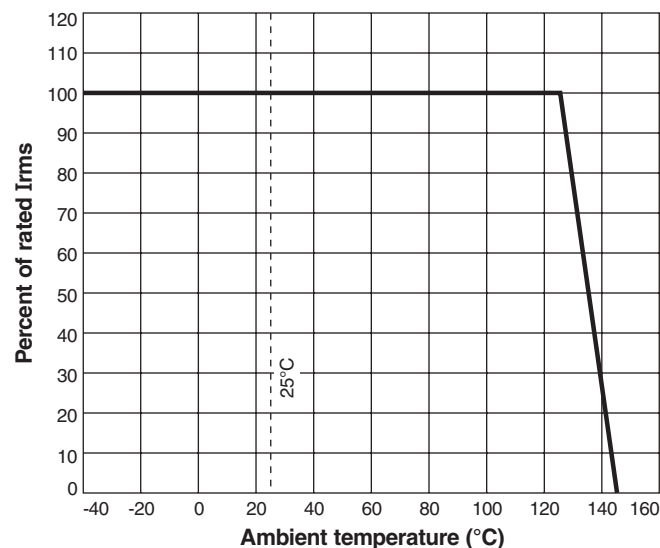
Typical Q vs Frequency



Typical L vs Frequency



Irms Derating



A	B	C	D	E	F	G	H	I	J
max	max	max	ref						
0.071	0.044	0.040	0.015	0.030	0.013	0.034	0.040	0.025	0.025
1,80	1,12	1,02	0,38	0,76	0,33	0,86	1,02	0,64	0,64

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

Данный компонент на территории Российской Федерации

Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: info@moschip.ru

Skype отдела продаж:

moschip.ru

moschip.ru_4

moschip.ru_6

moschip.ru_9