



# Chip Inductors - 0604HQ Series (1610)

- Combines the exceptionally high Q of an air core inductor with the rugged construction of a ceramic body component.
- Provides intermediate inductance values not available in Coilcraft's 0603, 0402 or 0906 product families

Request free evaluation samples by contacting Coilcraft or visiting [www.coilcraft.com](http://www.coilcraft.com).

Part number <sup>1</sup>	Inductance <sup>2</sup> (nH)	Percent tolerance <sup>3</sup>	Q min <sup>4</sup>	900 MHz		1.7 GHz		SRF min <sup>5</sup> (GHz)	DCR max <sup>6</sup> (Ohms)	Irms <sup>7</sup> (A)	Color code
				L typ	Q typ	L typ	Q typ				
0604HQ-1N1XJL_	1.15	<b>5</b>	25	1.2	40	1.2	136	12.3	0.021	3.0	Black
0604HQ-2N6XJL_	2.6	<b>5</b>	45	2.6	78	2.6	163	9.3	0.026	2.0	Brown
0604HQ-4N5XJL_	4.5	<b>5</b>	50	4.5	103	4.7	155	5.8	0.032	1.8	Red
0604HQ-5N0XJL_	5.0	<b>5</b>	60	4.9	106	5.2	178	5.3	0.032	1.6	Orange
0604HQ-6N8XJL_	6.8	<b>5</b>	60	6.9	101	7.4	172	4.7	0.035	1.8	Yellow
0604HQ-7N6XJL_	7.6	<b>5</b>	60	7.4	109	7.9	137	4.4	0.035	1.5	Green
0604HQ-10NXJL_	10.4	<b>5</b>	60	10.6	103	11.5	160	4.1	0.037	1.5	Blue

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

0604HQ-10NXJL C

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

**Packaging:** C = 7" machine-ready reel. EIA-481 embossed plastic tape (2000 parts per full reel).

B = Less than full reel. In tape, but not machine ready.  
To have a leader and trailer added (\$25 charge), use code letter C instead.

- Inductance measured at 500 MHz using a Coilcraft SMD-A fixture in an Agilent/HP 4286 impedance analyzer with Coilcraft-provided correlation pieces.
  - Tolerances in bold are stocked for immediate shipment.
  - Q measured at 500 MHz using an Agilent/HP 4291A with an Agilent/HP 16193 test fixture.
  - For SRF less than 6 GHz, measured using an Agilent/HP 8753D network analyzer and a Coilcraft SMD-D test fixture. For SRF greater than 6 GHz, measured using an Agilent/HP 8722ES network analyzer and a Coilcraft SMD-D test fixture.
  - DCR measured on a Cambridge Technology micro-ohmmeter and a Coilcraft CCF858 test fixture.
  - Current that causes a 15°C temperature rise from 25°C ambient.
  - Electrical specifications at 25°C.
  - Temperature coefficient of inductance: +25 to +125 ppm/°C.
- See Qualification Standards section for environmental and test data.  
Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

**Designer's Kit C351** contains 10 each of all values

**Core material** Ceramic

**Terminations** RoHS compliant silver-palladium-platinum-glass frit.  
Other terminations available at additional cost.

**Weight** 4.6 – 5.6 g

**Ambient temperature** –40°C to +125°C with I rms current, +125°C to +140°C with derated current

**Storage temperature** Component: –40°C to +140°C.  
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 +126 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; Plastic tape: 8 mm wide, 0.23 mm thick, 4 mm pocket spacing, 1.27 mm pocket depth

**PCB washing** Only pure water or alcohol recommended

# Coilcraft®

Specifications subject to change without notice.  
Please check our website for latest information.

Document 285-1 Revised 10/06/08

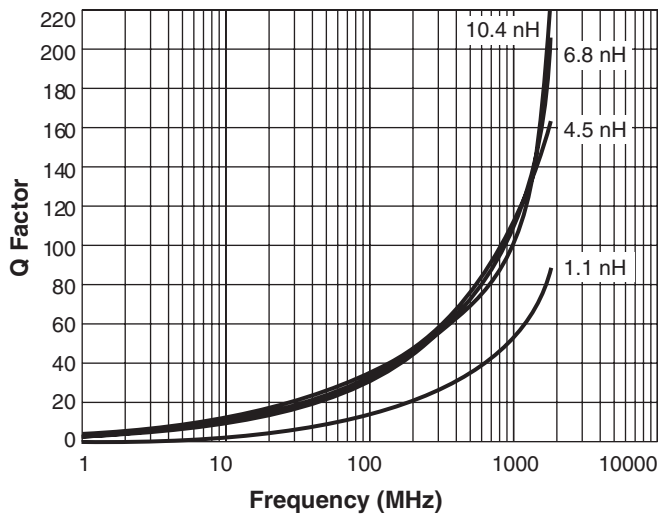
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# 0604HQ Series (1610)

## Typical Q vs Frequency



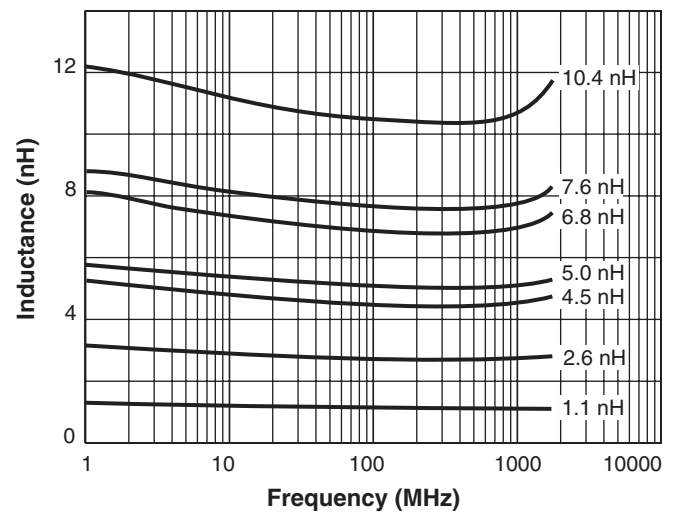
## S-Parameter files

ON OUR WEB SITE OR CD

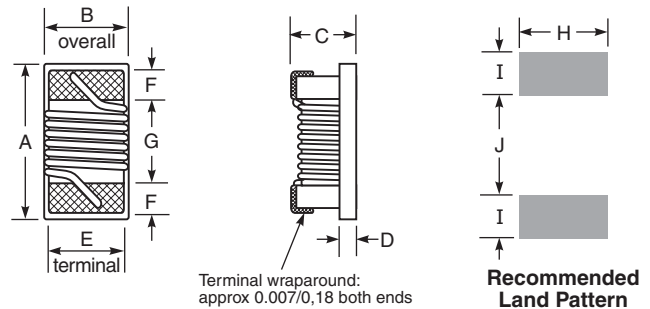
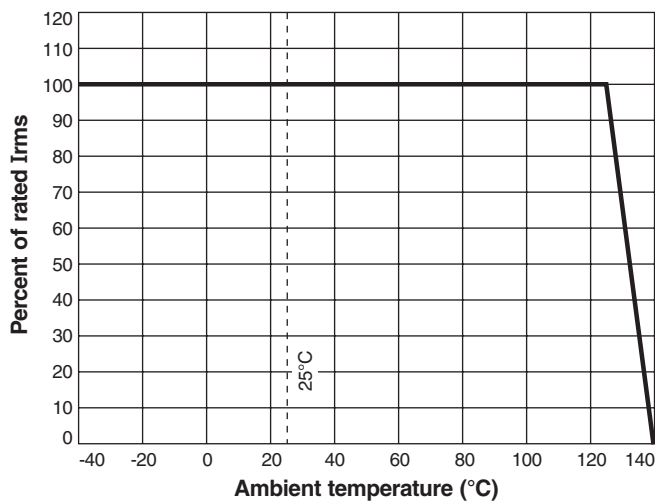
## SPICE models

ON OUR WEB SITE OR CD

## Typical L vs Frequency



## Irms Derating



A	B	C	D	E	F	G	H	I	J
max	max	max	ref						
0.073	0.054	0.047	0.025	0.040	0.013	0.034	0.053	0.025	0.025
1,85	1,37	1,19	0,64	1,02	0,33	0,86	1,35	0,63	0,63



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Document 285-2 Revised 10/06/08

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