



Chip Inductors - 0604HQ (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.

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

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

0604HQ-10NXJLC

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.
- 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 Irms current, +125°C to +140°C with derated current

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 +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

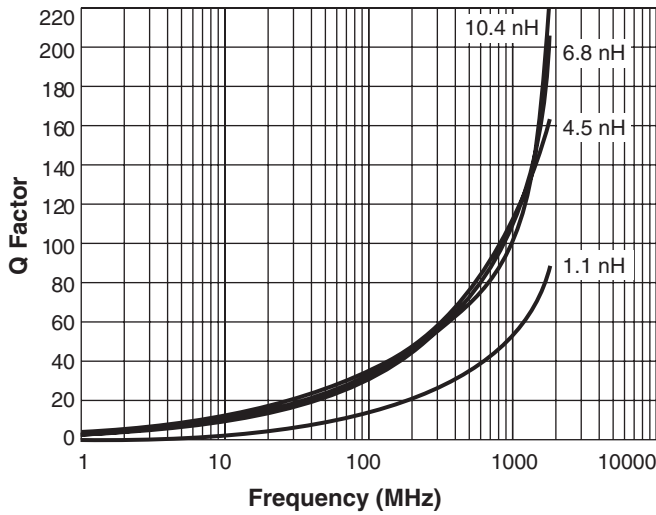
Packaging 2000 per 7" reel; Plastic tape: 8 mm wide, 0.23 mm thick, 4 mm pocket spacing, 1.27 mm pocket depth

PCB washing Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787_PCB_Washing.pdf](#).

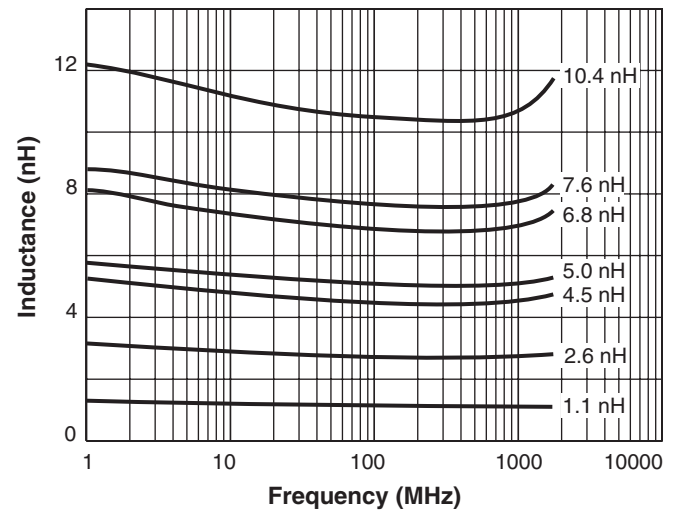


0604HQ Series (1610)

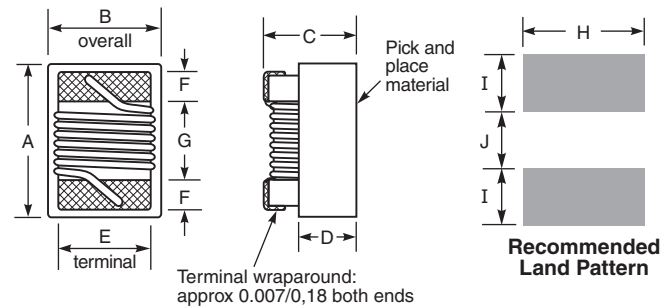
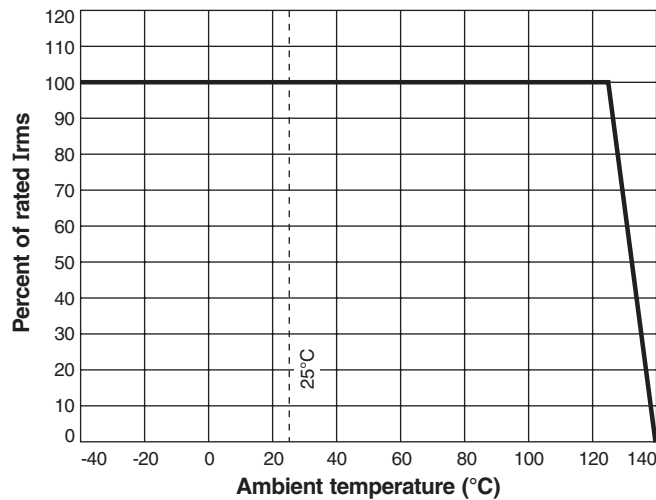
Typical Q vs Frequency



Typical L vs Frequency



Irms Derating



A	B	C	D	E	F	G	H	I	J
max	max	max	ref						
0.073	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

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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Mouser Electronics

Authorized Distributor

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Coilcraft:

<u>0604HQ-2N6XJLC</u>	<u>0604HQ-10NXJLB</u>	<u>0604HQ-6N8XJLC</u>	<u>0604HQ-4N5XJLB</u>	<u>0604HQ-1N1XJLB</u>	<u>0604HQ-6N8XJLB</u>
<u>0604HQ-5N0XJLC</u>	<u>0604HQ-7N6XJLB</u>	<u>0604HQ-5N0XJLB</u>	<u>0604HQ-10NXJLC</u>	<u>0604HQ-4N5XJLC</u>	<u>0604HQ-7N6XJLC</u>
<u>0604HQ-1N1XJLC</u>	<u>0604HQ-2N6XJLB</u>				