Chip Inductors - 0604HQ Series (1610)

The 0604HQ Series offers the highest Q factors and current handling capabilities of any inductor this small.

These parts combine the exceptionally high Q of an air core inductor with the rugged construction of a ceramic body component. They also provide intermediate inductance values not available in Coilcraft's 0603, 0402 or 0906 product families.

Coilcraft **Designer's Kit C351** contains samples of all values shown. To order, contact Coilcraft or purchase it on-line at **http://order.coilcraft.com**.

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] (GHz)	DCR max[6] (Ohms)	Irms[7] (A)	Color code
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-10NXJ L 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.

2. Inductance measured at 500 MHz using a Coilcraft SMD-A fixture in an Agilent/HP 4286 impedance analyzer with Coilcraft-provided correlation pieces.
3. Tolerances in bold are stocked for immediate shipment.
4. Q measured at 500 MHz using an Agilent/HP 4291A with an Agilent/HP 16193 test fixture.
5. 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.
6. DCR measured on a Cambridge Technology micro-ohmmeter and a Coilcraft CCF858 test fixture.
7. Current that causes a 15°C temperature rise from 25°C ambient.
8. **Ambient temperature range:** –40°C to +125°C with Irms current +125°C to +140°C with derated current
9. **Storage temperature range:** Component: –40°C to +140°C Packaging: –55°C to +80°C
10. **Resistance to soldering heat:** Three reflows at >217°C for 90 seconds (+260°C ±5°C for 20 – 40 seconds), allowing parts to cool to room temperature between.
11. Electrical specifications at 25°C.
12. 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.

COILCRAFT PRECISION TEST FIXTURES
ACCURATE REPEATABLE MEASUREMENTS
SEE INDEX

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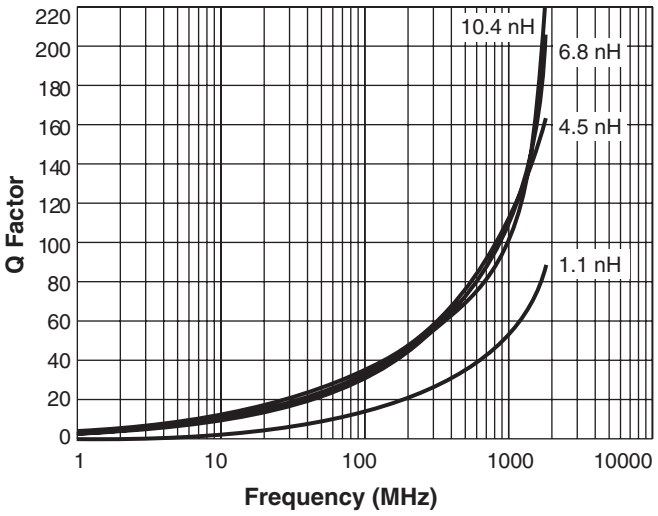
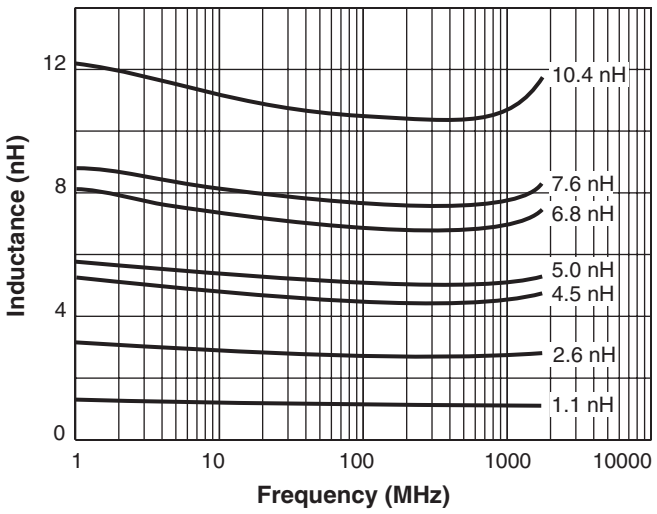
S-Parameter files
ON OUR WEB SITE OR CD
SPICE models
ON OUR WEB SITE OR CD

0604HQ Series (1610)

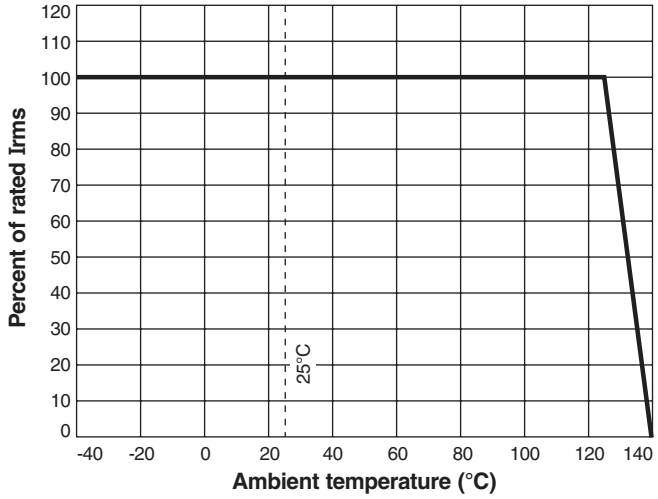
Typical Q vs Frequency

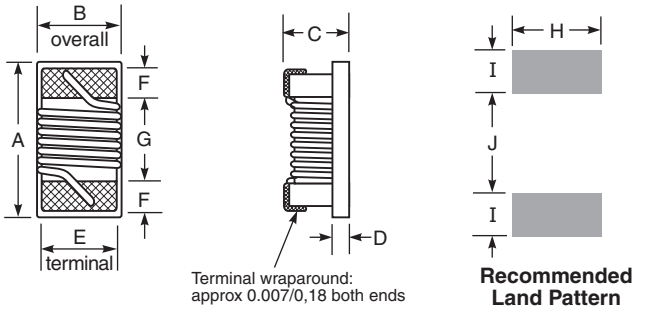


Typical L vs Frequency



Irms Derating





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

Weight: 4.6 – 5.6 mg
Tape and reel: 2000/7″ reel 8 mm tape width
For packaging data see Tape and Reel Specifications section.

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