

Chip Inductors - 0403HQ (1008)



- Very high Q factors and excellent current handling
- Intermediate L values not found in other series

Part number ¹	Inductance ² (nH)	Percent tolerance	Q min ³	900 MHz		1.7 GHz		SRF typ ⁴ (GHz)	DCR max ⁵ (Ohms)	Irms ⁶ (A)
				L typ	Q typ	L typ	Q typ			
0403HQ-1N9XJL_	1.9	5	40	1.9	62	1.9	94	11.84	0.012	2.2
0403HQ-2N1XJL_	2.1	5	35	2.1	56	2.1	88	12.40	0.019	1.8
0403HQ-3N4XJL_	3.4	5	40	3.4	66	3.5	96	8.97	0.016	1.9
0403HQ-3N7XJL_	3.7	5	40	3.7	64	3.8	95	8.65	0.018	1.8
0403HQ-5N5XJL_	5.5	5	40	5.5	62	5.7	93	8.60	0.022	1.5
0403HQ-6N6XJL_	6.6	5	40	6.6	60	6.9	92	7.30	0.046	1.1
0403HQ-8N2XJL_	8.2	5	40	8.2	63	8.5	92	6.73	0.040	1.2
0403HQ-9N0XJL_	9.0	5	40	9.1	66	9.5	90	6.85	0.055	1.0
0403HQ-12NXJL_	12	5	40	12.1	60	12.7	90	5.82	0.065	0.80
0403HQ-15NXJL_	15	5	35	15.2	60	16.0	90	5.82	0.188	0.50
0403HQ-18NXJL_	18	5	35	18.2	62	19.6	93	5.15	0.185	0.50

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

0403HQ-18NXJLW

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 500 MHz using a Coilcraft SMD-F fixture in an Agilent/HP 4286 impedance analyzer with Coilcraft-provided correlation pieces.

3. Q measured at 500 MHz using an Agilent/HP 4291A with an Agilent/HP 16193 test fixture.

4. SRF measured using an Agilent/HP 8722ES network analyzer and a test fixture with a 0.017" air gap.

5. DCR measured on a micro-ohmmeter and a Coilcraft CCF858 test fixture.

6. Current that causes a 30°C temperature rise from 25°C ambient. Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

Designer's Kit C371 contains 20 of each value

Core material Ceramic

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

Environmental RoHS compliant, halogen free optional

Weight 1.29 – 1.60 mg

Ambient temperature -40°C to +125°C with Irms current, +125°C to +155°C with derated current

Storage temperature Component: -40°C to +155°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; 7500 per 13" 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



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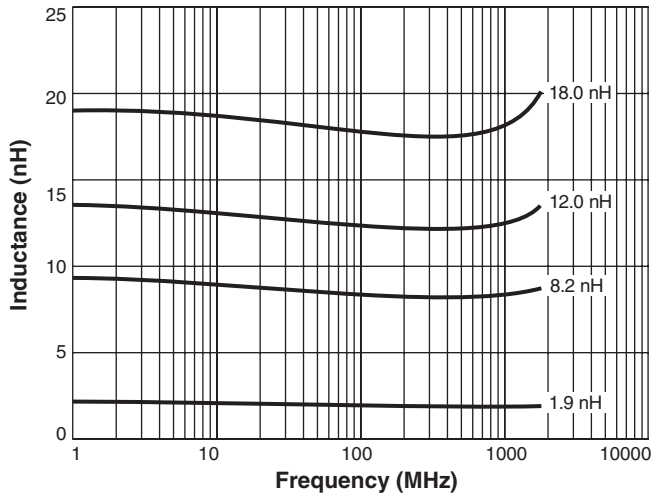
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0403HQ Series (1008)

Typical L vs Frequency



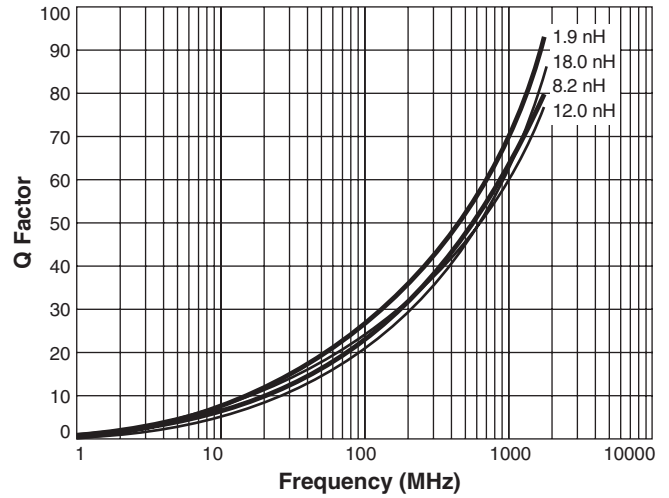
S-Parameter files

ON OUR WEB SITE

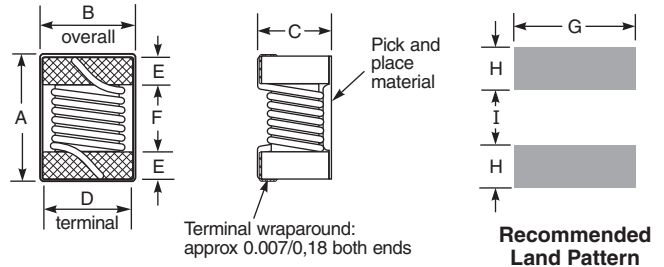
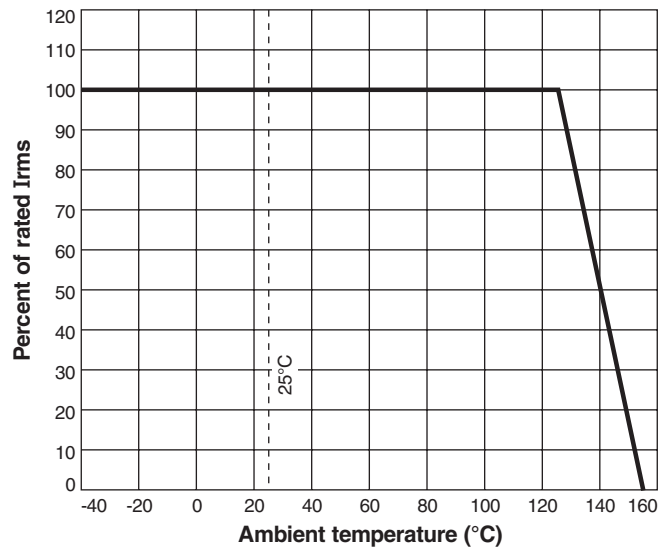
SPICE models

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Typical Q vs Frequency



Irms Derating



A	B	C	D	E	F	G	H	I
max	max	max						
0.047	0.034	0.028	0.030	0.009	0.022	0.040	0.014	0.018
1,19	0,86	0,71	0,76	0,23	0,56	1,02	0,36	0,46

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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