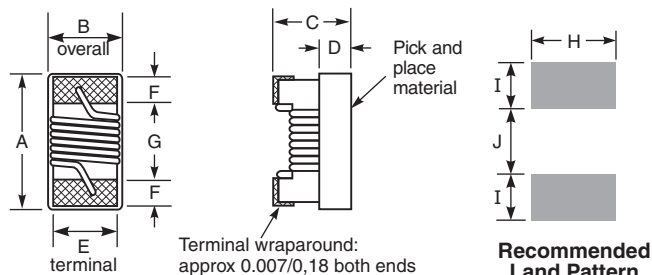




Chip Inductors - 0402HP Series (1005)

- Higher Q and lower DCR than other 0402 inductors
- Very high SRF values – as high as 16 GHz
- Excellent current handling capability – up to 2300 mA
- 52 inductance values from 1.0 to 220 nH



| | A max | B (min – max) | C max | |
|--------|-------|---------------|-------|--------|
| 0402HP | 0.043 | 0.020 – 0.028 | 0.024 | inches |
| | 1,09 | 0,51 – 0,71 | 0,61 | mm |

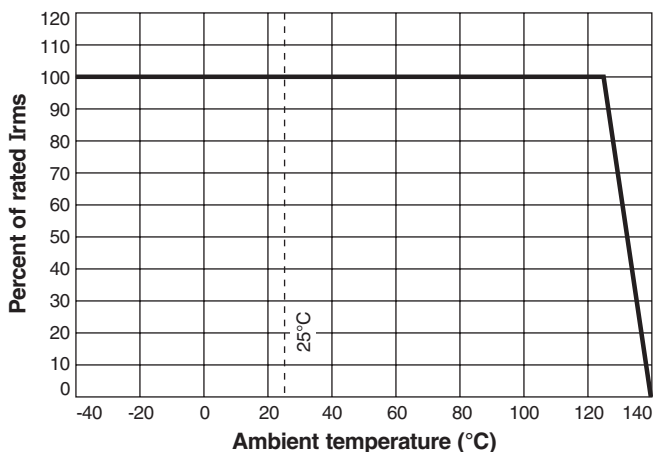
| | A max | B | C max | |
|---------|-------|--------------|-------|--------|
| 0402HPH | 0.044 | 0.026 ±0.002 | 0.026 | inches |
| | 1,12 | 0,66 ±0,051 | 0,66 | mm |

| D | E | F | G | H | I | J | |
|-------|-------|-------|-------|-------|-------|-------|--------|
| 0.010 | 0.020 | 0.008 | 0.024 | 0.026 | 0.014 | 0.020 | inches |
| 0,25 | 0,51 | 0,20 | 0,61 | 0,66 | 0,36 | 0,51 | mm |

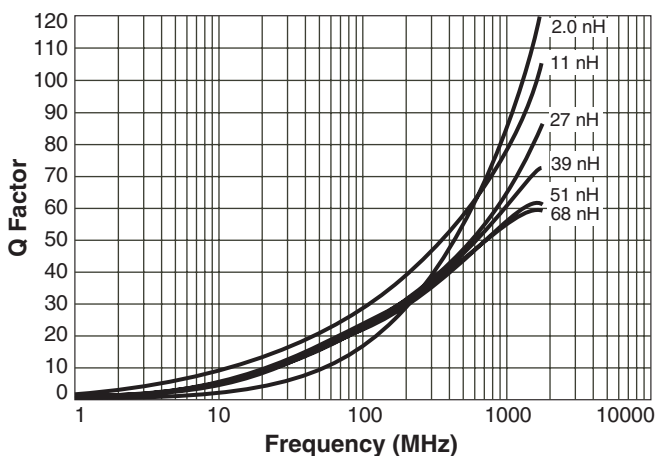
Note: Height dimension (C) is before optional solder application. For maximum height dimension including solder, add 0.006 in / 0,152 mm.

Core material Ceramic
Environmental RoHS compliant, halogen free optional
Terminations RoHS compliant silver-palladium-platinum-glass frit. Other terminations available at additional cost.
Weight 0.7 – 1.0 mg
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 +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 or 5000 per 7" reel. Paper tape: 8 mm wide, 0.66 mm thick, 2 mm pocket spacing
PCB washing Tested with pure water or alcohol only. For other solvents, see Doc787_PCB_Washing.pdf

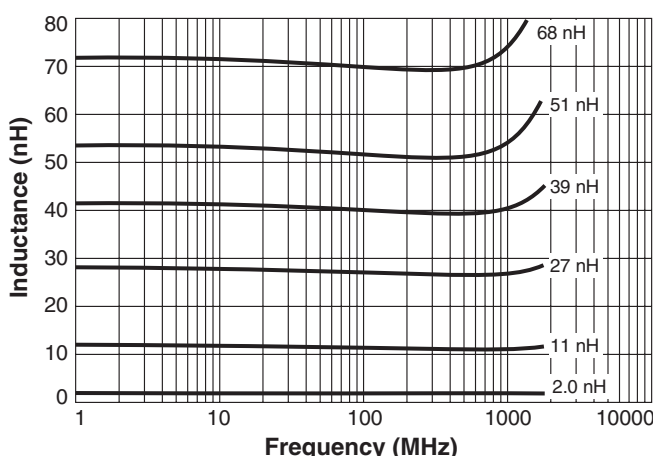
Current Derating



Typical Q vs Frequency



Typical L vs Frequency



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 526-1 Revised 08/08/13
 © 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.



0402HP Series (1005)

Designer's Kits C403A and B contain 20 each of 5% values
Designer's Kits C403A-2 and B-2 contain 20 each of 2% values

| Part number ¹ | Inductance ² (nH) | Percent tolerance ³ | Test freq (MHz) | 900 MHz | | 1.7 GHz | | SRF typ ⁵ (GHz) | DCR max ⁶ (Ohms) | Irms ⁷ (mA) |
|--------------------------|---------------------------------|-----------------------------------|--------------------|---------|--------------------|---------|--------------------|-------------------------------|--------------------------------|---------------------------|
| | | | | L typ | Q typ ⁴ | L typ | Q typ ⁴ | | | |
| 0402HP-1N0XJL_ | 1.0 | 5 | 250 | 0.97 | 46 | 0.99 | 72 | 16.0 | 0.030 | 2300 |
| 0402HP-2N0XJL_ | 2.0 | 5 | 250 | 1.96 | 58 | 1.98 | 85 | 15.2 | 0.038 | 2100 |
| 0402HP-2N2XJL_ | 2.2 | 5 | 250 | 2.17 | 60 | 2.17 | 86 | 15.1 | 0.038 | 2100 |
| 0402HP-2N4X_L_ | 2.4 | 5,3,2 | 250 | 2.37 | 60 | 2.38 | 83 | 14.0 | 0.042 | 2000 |
| 0402HP-2N7X_L_ | 2.7 | 5,3,2 | 250 | 2.66 | 62 | 2.68 | 85 | 13.0 | 0.085 | 1500 |
| 0402HP-3N3X_L_ | 3.3 | 5,3,2 | 250 | 3.26 | 66 | 3.28 | 95 | 12.8 | 0.045 | 1700 |
| 0402HP-3N6X_L_ | 3.6 | 5,3,2 | 250 | 3.56 | 65 | 3.58 | 94 | 11.7 | 0.045 | 1700 |
| 0402HP-3N9X_L_ | 3.9 | 5,3,2 | 250 | 3.87 | 64 | 3.91 | 98 | 9.50 | 0.045 | 1700 |
| 0402HP-4N3X_L_ | 4.3 | 5,3,2 | 250 | 4.26 | 63 | 4.33 | 90 | 7.15 | 0.050 | 1600 |
| 0402HP-4N7X_L_ | 4.7 | 5,3,2 | 250 | 4.67 | 58 | 4.74 | 83 | 6.85 | 0.075 | 1500 |
| 0402HP-5N1X_L_ | 5.1 | 5,3,2 | 250 | 5.07 | 54 | 5.16 | 76 | 6.80 | 0.125 | 1200 |
| 0402HP-5N6X_L_ | 5.6 | 5,3,2 | 250 | 5.56 | 73 | 5.66 | 105 | 6.50 | 0.055 | 1600 |
| 0402HP-6N2X_L_ | 6.2 | 5,3,2 | 250 | 6.18 | 73 | 6.25 | 100 | 5.80 | 0.055 | 1600 |
| 0402HP-6N8X_L_ | 6.8 | 5,3,2 | 250 | 6.78 | 68 | 6.97 | 94 | 5.80 | 0.070 | 1500 |
| 0402HP-7N5X_L_ | 7.5 | 5,3,2 | 250 | 7.49 | 60 | 7.77 | 82 | 5.40 | 0.100 | 1400 |
| 0402HP-8N2X_L_ | 8.2 | 5,3,2 | 250 | 8.10 | 68 | 8.40 | 95 | 5.40 | 0.065 | 1500 |
| 0402HP-8N7X_L_ | 8.7 | 5,3,2 | 250 | 8.73 | 66 | 9.04 | 95 | 5.00 | 0.070 | 1500 |
| 0402HP-9N0X_L_ | 9.0 | 5,3,2 | 250 | 8.99 | 67 | 9.21 | 92 | 5.00 | 0.080 | 1400 |
| 0402HP-9N5X_L_ | 9.5 | 5,3,2 | 250 | 9.52 | 64 | 9.97 | 90 | 4.70 | 0.090 | 1400 |
| 0402HP-10NX_L_ | 10 | 5,3,2 | 250 | 9.98 | 62 | 10.4 | 90 | 4.70 | 0.110 | 1300 |
| 0402HP-11NX_L_ | 11 | 5,3,2 | 250 | 11.0 | 68 | 11.6 | 98 | 4.70 | 0.065 | 1400 |
| 0402HP-12NX_L_ | 12 | 5,3,2 | 250 | 12.0 | 66 | 12.6 | 100 | 4.40 | 0.100 | 1200 |
| 0402HP-13NX_L_ | 13 | 5,3,2 | 250 | 13.1 | 62 | 13.9 | 82 | 4.20 | 0.155 | 870 |
| 0402HP-15NX_L_ | 15 | 5,3,2 | 250 | 15.1 | 62 | 16.0 | 85 | 3.90 | 0.115 | 1100 |
| 0402HP-16NX_L_ | 16 | 5,3,2 | 250 | 16.2 | 57 | 17.3 | 77 | 3.70 | 0.150 | 850 |
| 0402HP-18NX_L_ | 18 | 5,3,2 | 250 | 18.2 | 58 | 19.5 | 74 | 3.55 | 0.120 | 900 |
| 0402HP-19NX_L_ | 19 | 5,3,2 | 250 | 19.2 | 61 | 20.7 | 88 | 3.50 | 0.145 | 850 |
| 0402HP-20NX_L_ | 20 | 5,3,2 | 250 | 20.3 | 58 | 22.0 | 76 | 3.50 | 0.185 | 780 |
| 0402HP-21NX_L_ | 21 | 5,3,2 | 250 | 21.3 | 48 | 23.2 | 62 | 1.70 | 0.460 | 450 |
| 0402HP-22NX_L_ | 22 | 5,3,2 | 250 | 22.3 | 60 | 24.4 | 74 | 3.30 | 0.160 | 800 |
| 0402HP-23NX_L_ | 23 | 5,3,2 | 250 | 23.3 | 60 | 25.5 | 77 | 3.30 | 0.160 | 800 |
| 0402HP-24NX_L_ | 24 | 5,3,2 | 250 | 24.5 | 55 | 27.1 | 71 | 3.15 | 0.210 | 700 |
| 0402HP-25NX_L_ | 25 | 5,3,2 | 250 | 25.5 | 57 | 28.3 | 73 | 3.15 | 0.260 | 700 |
| 0402HP-26NX_L_ | 26 | 5,3,2 | 250 | 26.6 | 56 | 29.3 | 74 | 3.15 | 0.290 | 700 |
| 0402HP-27NX_L_ | 27 | 5,3,2 | 250 | 27.3 | 62 | 29.5 | 86 | 3.20 | 0.350 | 450 |
| 0402HP-30NX_L_ | 30 | 5,3,2 | 250 | 30.8 | 61 | 35.0 | 87 | 2.90 | 0.350 | 450 |
| 0402HP-33NX_L_ | 33 | 5,3,2 | 250 | 34.0 | 61 | 38.3 | 80 | 2.80 | 0.330 | 490 |
| 0402HP-36NX_L_ | 36 | 5,3,2 | 250 | 37.1 | 59 | 42.2 | 76 | 2.80 | 0.390 | 480 |
| 0402HP-37NX_L_ | 37 | 5,3,2 | 250 | 38.2 | 57 | 44.0 | 72 | 2.70 | 0.480 | 470 |
| 0402HP-39NX_L_ | 39 | 5,3,2 | 250 | 40.5 | 56 | 47.0 | 84 | 2.60 | 0.430 | 450 |
| 0402HP-40NX_L_ | 40 | 5,3,2 | 250 | 41.3 | 56 | 47.4 | 75 | 2.60 | 0.430 | 450 |
| 0402HP-43NX_L_ | 43 | 5,3,2 | 250 | 45.0 | 52 | 54.1 | 68 | 2.50 | 0.520 | 450 |
| 0402HP-47NX_L_ | 47 | 5,3,2 | 250 | 49.0 | 48 | 58.9 | 62 | 2.40 | 0.580 | 420 |
| 0402HP-51NX_L_ | 51 | 5,3,2 | 250 | 49.1 | 52 | 58.8 | 59 | 2.30 | 0.700 | 360 |
| 0402HPH-56NX_L_ | 56 | 5,3,2 | 250 | 58.8 | 56 | 72.2 | 64 | 2.07 | 0.900 | 330 |
| 0402HPH-68NX_L_ | 68 | 5,3,2 | 250 | 72.2 | 56 | 91.4 | 64 | 1.84 | 1.00 | 320 |
| 0402HPH-82NX_L_ | 82 | 5,3,2 | 250 | 89.7 | 52 | — | — | 1.75 | 1.10 | 315 |
| 0402HPH-R10X_L_ | 100 | 5,3,2 | 250 | — | — | — | — | 1.58 | 1.20 | 310 |
| 0402HPH-R12X_L_ | 120 | 5,3,2 | 250 | — | — | — | — | 1.25 | 1.20 | 310 |
| 0402HPH-R15X_L_ | 150 | 5,3,2 | 100 | — | — | — | — | 1.14 | 2.0 | 240 |
| 0402HPH-R18X_L_ | 180 | 5,3,2 | 100 | — | — | — | — | 1.08 | 2.1 | 240 |
| 0402HPH-R22X_L_ | 220 | 5,3,2 | 100 | — | — | — | — | 0.96 | 3.1 | 160 |

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

0402HP-82NXJLW

Tolerance: G = 2% H = 3% 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).
Q = 7" machine-ready reel. EIA-481 punched paper tape (5000 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 test frequency using a Coilcraft SMD-F 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 using an Agilent/HP 4287A with an Agilent/HP 16197 test fixture.

5. SRF measured using an Agilent/HP 8722ES network analyzer and a Coilcraft SMD-D test fixture.

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

7. Current that causes a 15°C temperature rise from 25°C ambient.

8. Electrical specifications at 25°C.
Refer to Doc 362 "Soldering Surface Mount Components" before soldering.



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 526-2 Revised 08/08/13

© 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.



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

Телефон: 8 (812) 309 58 32 (многоканальный)

Факс: 8 (812) 320-02-42

Электронная почта: org@eplast1.ru

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.