

# Chip Inductors – 0805HT (2012)



At just 0.035" high, these are one of our lowest profile surface mount inductors. Their wire wound ceramic design provides tight tolerances, exceptional Q and high SRF values.

Coilcraft **Designer's Kit C321** contains samples of all 5% parts shown as stocked. To order, contact Coilcraft or visit <http://order.coilcraft.com> to purchase on-line.

| Part number <sup>1</sup> | Inductance <sup>2</sup><br>(nH) | Percent tolerance <sup>3</sup> | Q min <sup>4</sup> | SRF min <sup>5</sup><br>(MHz) | DCR max <sup>6</sup><br>(Ohms) | Irms <sup>7</sup><br>(mA) | Color Code |
|--------------------------|---------------------------------|--------------------------------|--------------------|-------------------------------|--------------------------------|---------------------------|------------|
| 0805HT-1N8TJE_           | 1.8 @ 250 MHz                   | <b>5</b>                       | 55 @ 1500 MHz      | 9400                          | 0.030                          | 800                       | Black      |
| 0805HT-2N0TJE_           | 2.0 @ 250 MHz                   | <b>5</b>                       | 55 @ 1500 MHz      | 11500                         | 0.018                          | 800                       | Violet     |
| 0805HT-3N9TJE_           | 3.9 @ 250 MHz                   | <b>5</b>                       | 50 @ 1000 MHz      | 6100                          | 0.055                          | 800                       | Brown      |
| 0805HT-4N3TJE_           | 4.3 @ 250 MHz                   | <b>5</b>                       | 80 @ 1000 MHz      | 6364                          | 0.030                          | 800                       | White      |
| 0805HT-4N7TJE_           | 4.7 @ 250 MHz                   | <b>5</b>                       | 50 @ 1000 MHz      | 5500                          | 0.060                          | 800                       | Red        |
| 0805HT-5N1TJE_           | 5.1 @ 250 MHz                   | <b>5</b>                       | 45 @ 1000 MHz      | 6100                          | 0.069                          | 800                       | Blue       |
| 0805HT-5N6TJE_           | 5.6 @ 250 MHz                   | <b>5</b>                       | 45 @ 1000 MHz      | 5800                          | 0.091                          | 800                       | Gray       |
| 0805HT-6N8TJE_           | 6.8 @ 250 MHz                   | <b>5</b>                       | 50 @ 1000 MHz      | 4800                          | 0.080                          | 800                       | Orange     |
| 0805HT-7N5TJE_           | 7.5 @ 250 MHz                   | <b>5</b>                       | 47 @ 1000 MHz      | 4600                          | 0.082                          | 800                       | Black      |
| 0805HT-8N2TJE_           | 8.2 @ 250 MHz                   | <b>5</b>                       | 50 @ 1000 MHz      | 4800                          | 0.080                          | 800                       | Yellow     |
| 0805HT-9N1TJE_           | 9.1 @ 250 MHz                   | <b>5</b>                       | 54 @ 1000 MHz      | 3900                          | 0.105                          | 800                       | Red        |
| 0805HT-10NT_E_           | 10 @ 250 MHz                    | <b>5,2</b>                     | 55 @ 750 MHz       | 3300                          | 0.080                          | 800                       | Green      |
| 0805HT-12NT_E_           | 12 @ 250 MHz                    | <b>5,2</b>                     | 55 @ 750 MHz       | 3800                          | 0.10                           | 800                       | Blue       |
| 0805HT-15NT_E_           | 15 @ 250 MHz                    | <b>5,2</b>                     | 50 @ 500 MHz       | 2950                          | 0.10                           | 800                       | Violet     |
| 0805HT-18NT_E_           | 18 @ 250 MHz                    | <b>5,2</b>                     | 50 @ 500 MHz       | 3100                          | 0.13                           | 800                       | Gray       |
| 0805HT-20NT_E_           | 20 @ 250 MHz                    | <b>5,2</b>                     | 50 @ 500 MHz       | 2700                          | 0.17                           | 800                       | Yellow     |
| 0805HT-22NT_E_           | 22 @ 250 MHz                    | <b>5,2</b>                     | 50 @ 500 MHz       | 2900                          | 0.15                           | 800                       | White      |
| 0805HT-27NT_E_           | 27 @ 250 MHz                    | <b>5,2</b>                     | 50 @ 500 MHz       | 2450                          | 0.19                           | 700                       | Black      |
| 0805HT-33NT_E_           | 33 @ 250 MHz                    | <b>5,2</b>                     | 55 @ 500 MHz       | 2350                          | 0.19                           | 600                       | Brown      |
| 0805HT-39NT_E_           | 39 @ 250 MHz                    | <b>5,2,1</b>                   | 55 @ 500 MHz       | 2200                          | 0.27                           | 600                       | Red        |
| 0805HT-47NT_E_           | 47 @ 200 MHz                    | <b>5,2,1</b>                   | 50 @ 500 MHz       | 2000                          | 0.30                           | 600                       | Orange     |
| 0805HT-56NT_E_           | 56 @ 200 MHz                    | <b>5,2,1</b>                   | 50 @ 500 MHz       | 1850                          | 0.39                           | 500                       | Yellow     |
| 0805HT-68NT_E_           | 68 @ 200 MHz                    | <b>5,2,1</b>                   | 50 @ 500 MHz       | 1500                          | 0.40                           | 500                       | Green      |
| 0805HT-82NT_E_           | 82 @ 150 MHz                    | <b>5,2,1</b>                   | 50 @ 500 MHz       | 1500                          | 0.44                           | 500                       | Blue       |
| 0805HT-R10T_E_           | 100 @ 150 MHz                   | <b>5,2</b>                     | 50 @ 500 MHz       | 1200                          | 0.64                           | 400                       | Violet     |
| 0805HT-R12T_E_           | 120 @ 150 MHz                   | <b>5,2</b>                     | 40 @ 250 MHz       | 1150                          | 0.68                           | 300                       | Gray       |
| 0805HT-R15T_E_           | 150 @ 150 MHz                   | <b>5,2</b>                     | 40 @ 250 MHz       | 1050                          | 0.80                           | 300                       | White      |
| 0805HT-R18T_E_           | 180 @ 150 MHz                   | <b>5,2</b>                     | 40 @ 250 MHz       | 830                           | 0.86                           | 300                       | Black      |
| 0805HT-R22T_E_           | 220 @ 150 MHz                   | <b>5,2</b>                     | 39 @ 150 MHz       | 820                           | 1.29                           | 200                       | Orange     |
| 0805HT-R27T_E_           | 270 @ 150 MHz                   | <b>5,2</b>                     | 33 @ 150 MHz       | 790                           | 1.40                           | 200                       | Yellow     |
| 0805HT-R33T_E_           | 330 @ 150 MHz                   | <b>5,2</b>                     | 32 @ 150 MHz       | 730                           | 1.93                           | 200                       | Green      |
| 0805HT-R39T_E_           | 390 @ 100 MHz                   | <b>5,2</b>                     | 30 @ 150 MHz       | 675                           | 2.80                           | 200                       | Blue       |
| 0805HT-R47T_E_           | 470 @ 100 MHz                   | <b>5,2</b>                     | 30 @ 150 MHz       | 610                           | 3.10                           | 200                       | Violet     |
| 0805HT-R50T_E_           | 500 @ 50 MHz                    | <b>5,2</b>                     | 20 @ 50 MHz        | 585                           | 3.20                           | 200                       | Gray       |

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

### 0805HT-R22TGEC

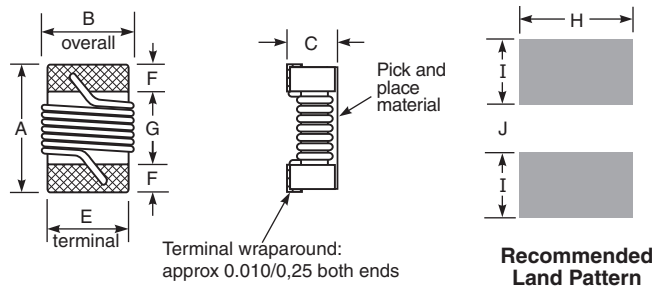
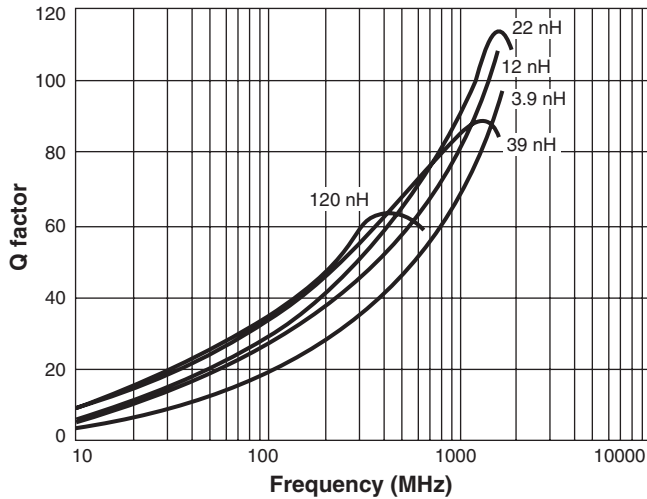
- Tolerance:** F = 1% G = 2% J = 5%  
(Table shows stock tolerances in bold.)
- Termination:** E = Halogen free component. RoHS compliant silver-palladium-platinum-glass frit terminations.  
L = RoHS compliant, not halogen-free. Silver-palladium-platinum-glass frit terminations.  
R = RoHS compliant matte tin over nickel over silver-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). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer (\$25 charge).  
D = 13" machine-ready reel. EIA-481 embossed plastic tape. Factory order only, not stocked (7500 parts per full reel).  
B = Less than full reel. In an effort to simplify our part numbering system, Coilcraft is eliminating the need for multiple packaging codes. When ordering, simply change the last letter of your part number from B to C.

- Inductance measured using a Coilcraft SMD-A fixture in an Agilent/HP 4286A impedance analyzer with Coilcraft-provided correlation pieces.
  - Tolerances in bold are stocked for immediate shipment.
  - Q measured using an Agilent/HP 4291A with an Agilent/HP 16193 test fixture and on an Agilent/HP 8753D with a Coilcraft SMD-D test fixture.
  - SRF measured using an Agilent/HP 8720D 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. This information is for reference only and does not represent absolute maximum ratings.
  - Electrical specifications at 25°C.
- Refer to Doc 362 "Soldering Surface Mount Components" before soldering.



# 0805HT Series (2012)

## Typical Q vs Frequency

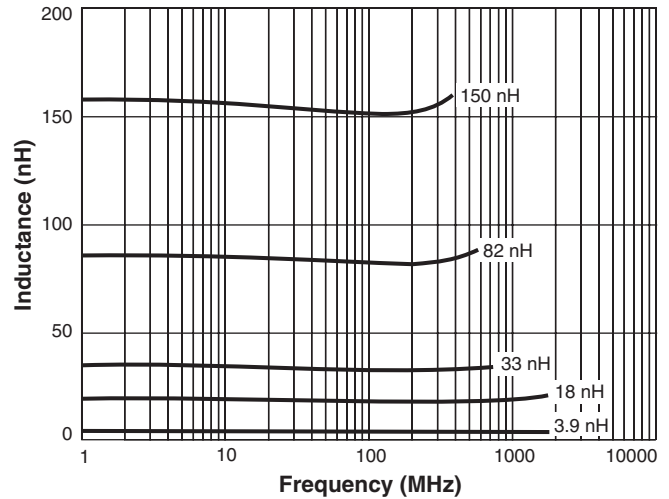


| A     | B     | C     | E     | F     | G     | H     | I     | J     |        |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| max   | max   | max   |       |       |       |       |       |       | inches |
| 0.085 | 0.060 | 0.035 | 0.050 | 0.017 | 0.045 | 0.070 | 0.040 | 0.030 |        |
| 2,16  | 1,52  | 0,89  | 1,27  | 0,43  | 1,14  | 1,78  | 1,02  | 0,76  | mm     |

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

**S-Parameter files**  
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## Typical L vs Frequency



- Designer's Kit C321** contains samples of all 5% tolerance parts
- Core material** Ceramic
- Environmental** RoHS compliant, halogen free
- Terminations** Silver-palladium-platinum-glass frit. Other terminations available at additional cost.
- Weight** 6.0 – 6.9 mg
- Ambient temperature** -40°C to +125°C with Irms current
- Maximum part temperature** +140°C (ambient + temp rise).
- 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)
- Packaging** 2000/7" reel; 7500/13" reel; Plastic tape: 8 mm wide, 0.23 mm thick, 4 mm pocket spacing, 0.9 mm pocket depth
- PCB washing** Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787\\_PCB\\_Washing.pdf](#).



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