



# Chip Inductors – 0805HS Series (2012)

Ceramic body and wire wound construction provide highest SRFs available in 0805 size. These ultra-compact inductors provide exceptional Q values, even at high frequencies.

Free evaluation samples are available by contacting Coilcraft or ordering them on-line at [www.coilcraft.com](http://www.coilcraft.com).

| 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 |
|--------------------------|---------------------------------|--------------------------------|--------------------|-------------------------------|--------------------------------|---------------------------|------------|
| 0805HS-030TJL_           | 3.3 @ 250 MHz                   | <b>5</b>                       | 50 @ 1500MHz       | 7900                          | 0.08                           | 600                       | Black      |
| 0805HS-060TJL_           | 6.8 @ 250 MHz                   | <b>5</b>                       | 50 @ 1000MHz       | 5500                          | 0.11                           | 600                       | Brown      |
| 0805HS-080TJL_           | 8.2 @ 250 MHz                   | <b>5</b>                       | 50 @ 1000MHz       | 4700                          | 0.12                           | 600                       | Red        |
| 0805HS-100TJL_           | 10 @ 250 MHz                    | <b>5</b>                       | 60 @ 500 MHz       | 4200                          | 0.10                           | 600                       | Blue       |
| 0805HS-120TJL_           | 12 @ 250 MHz                    | <b>5</b>                       | 50 @ 500 MHz       | 4000                          | 0.15                           | 600                       | Orange     |
| 0805HS-150TJL_           | 15 @ 250 MHz                    | <b>5</b>                       | 50 @ 500 MHz       | 3400                          | 0.17                           | 600                       | Yellow     |
| 0805HS-180TJL_           | 18 @ 250 MHz                    | <b>5</b>                       | 50 @ 500 MHz       | 3300                          | 0.20                           | 600                       | Green      |
| 0805HS-220T_L_           | 22 @ 250 MHz                    | <b>5,2</b>                     | 55 @ 500 MHz       | 2600                          | 0.22                           | 500                       | Blue       |
| 0805HS-270T_L_           | 27 @ 250 MHz                    | <b>5,2</b>                     | 55 @ 500 MHz       | 2500                          | 0.25                           | 500                       | Violet     |
| 0805HS-330T_L_           | 33 @ 250 MHz                    | <b>5,2</b>                     | 60 @ 500 MHz       | 2050                          | 0.27                           | 500                       | Gray       |
| 0805HS-390T_L_           | 39 @ 250 MHz                    | <b>5,2</b>                     | 60 @ 500 MHz       | 2000                          | 0.29                           | 500                       | White      |
| 0805HS-470T_L_           | 47 @ 200 MHz                    | <b>5,2</b>                     | 60 @ 500 MHz       | 1650                          | 0.31                           | 500                       | Black      |
| 0805HS-560T_L_           | 56 @ 200 MHz                    | <b>5,2,1</b>                   | 60 @ 500 MHz       | 1550                          | 0.34                           | 500                       | Brown      |
| 0805HS-680T_L_           | 68 @ 200 MHz                    | <b>5,2,1</b>                   | 60 @ 500 MHz       | 1450                          | 0.38                           | 500                       | Red        |
| 0805HS-820T_L_           | 82 @ 150 MHz                    | <b>5,2,1</b>                   | 65 @ 500 MHz       | 1300                          | 0.42                           | 400                       | Orange     |
| 0805HS-101T_L_           | 100 @ 150 MHz                   | <b>5,2,1</b>                   | 65 @ 500 MHz       | 1200                          | 0.46                           | 400                       | Yellow     |
| 0805HS-121T_L_           | 120 @ 150 MHz                   | <b>5,2,1</b>                   | 50 @ 250 MHz       | 1100                          | 0.51                           | 400                       | Green      |
| 0805HS-151T_L_           | 150 @ 100 MHz                   | <b>5,2,1</b>                   | 50 @ 250 MHz       | 920                           | 0.56                           | 400                       | Blue       |
| 0805HS-181T_L_           | 180 @ 100 MHz                   | <b>5,2,1</b>                   | 50 @ 250 MHz       | 870                           | 0.64                           | 400                       | Violet     |
| 0805HS-221T_L_           | 220 @ 100 MHz                   | <b>5,2</b>                     | 50 @ 250 MHz       | 850                           | 0.70                           | 400                       | Gray       |

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

0805HS-221T J L C

**Tolerance:** F = 1% G = 2% J = 5%

(Table shows stock tolerances in bold.)

**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.

D = 13" machine-ready reel. EIA-481 embossed plastic tape (7500 parts per full reel).

2. Inductance measured using a Coilcraft SMD-A fixture in an Agilent/HP 4286A impedance analyzer with Coilcraft-provided correlation pieces.

3. Tolerances in bold are stocked for immediate shipment.

4. Q measured using an Agilent/HP 4291A with an Agilent/HP 16193 test fixture.

5. SRF measured using an Agilent/HP 8720D 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. Electrical specifications at 25°C.

Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

**Core material** Ceramic

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

**Weight** 9.8 – 10.9 mg

**Ambient temperature** –40°C to +85°C with I rms current, +85°C to +100°C with derated current

**Storage temperature** Component: –40°C to +100°C.  
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)

**Mean Time Between Failures (MTBF)** 1 billion hours

**Packaging** 2000/7" reel; 750/13" reel Paper tape: 8 mm wide, 0.23 mm thick, 4 mm pocket spacing, 1.3 mm pocket depth

**PCB washing** Only pure water or alcohol recommended

**COILCRAFT** ACCURATE  
**PRECISION** REPEATABLE  
MEASUREMENTS  
SEE INDEX **TEST FIXTURES**

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Specifications subject to change without notice.  
Please check our website for latest information.

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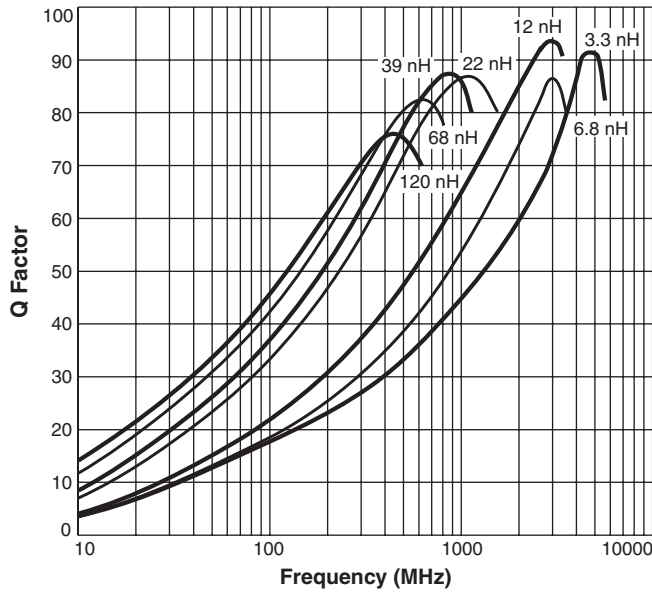
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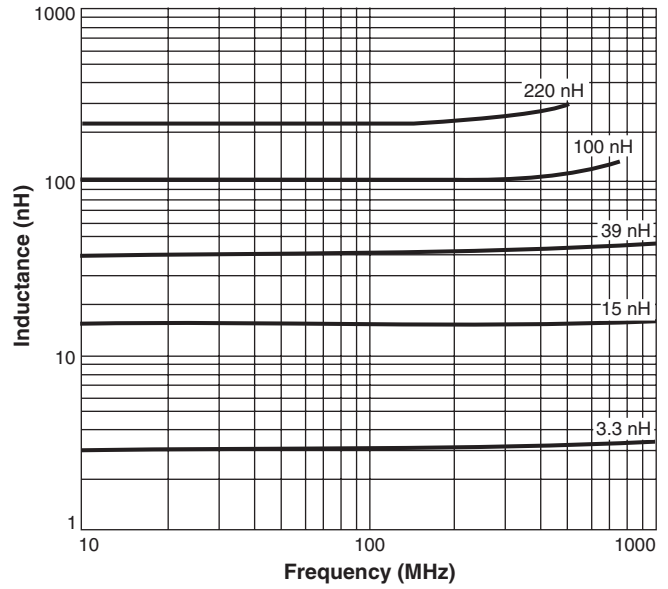
# 0805HS Series (2012)

## Typical Q vs Frequency

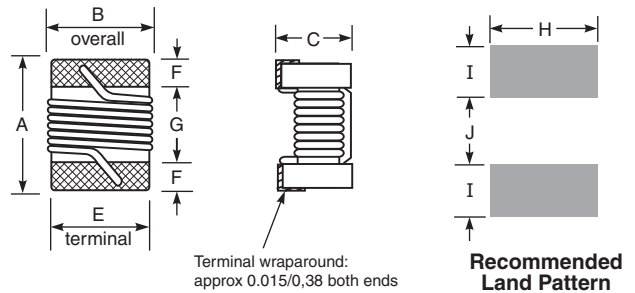
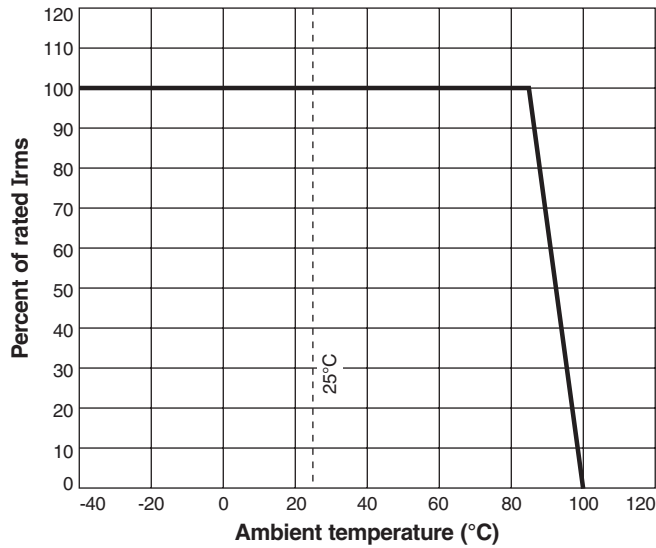


**S-Parameter files**  
ON OUR WEB SITE OR CD  
**SPICE models**  
ON OUR WEB SITE OR CD

## Typical L vs Frequency



## Irms Derating



| A     | B     | C     | E     | F     | G     | H     | I     | J     |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| max   | max   | max   |       |       |       |       |       |       |
| 0.085 | 0.060 | 0.057 | 0.050 | 0.020 | 0.040 | 0.070 | 0.040 | 0.030 |
| 2,16  | 1,52  | 1,45  | 1,27  | 0,51  | 1,02  | 1,78  | 1,02  | 0,76  |
|       |       |       |       |       |       |       |       |       |
|       |       |       |       |       |       |       |       |       |

inches  
mm



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