



# Chip Inductors – 0805HS (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> (nH)	Percent tolerance <sup>3</sup>	Q min <sup>4</sup>	SRF min <sup>5</sup> (MHz)	DCR max <sup>6</sup> (Ohms)	Irms <sup>7</sup> (mA)	Color code
0805HS-030TJL_	3.3 @ 250 MHz	<b>5</b>	50 @ 1500 MHz	7900	0.08	600	Black
0805HS-060TJL_	6.8 @ 250 MHz	<b>5</b>	50 @ 1000 MHz	5500	0.11	600	Brown
0805HS-080TJL_	8.2 @ 250 MHz	<b>5</b>	50 @ 1000 MHz	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-221TJLC**

**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 Irms current, +85°C to +100°C with derated current

**Storage temperature** Component: –40°C to +100°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** 2000/7" reel; 750/13" reel Paper tape: 8 mm wide, 0.23 mm thick, 4 mm pocket spacing, 1.3 mm pocket depth

**PCB washing** Tested with pure water or alcohol only. For other solvents, see Doc787\_PCB\_Washing.pdf.



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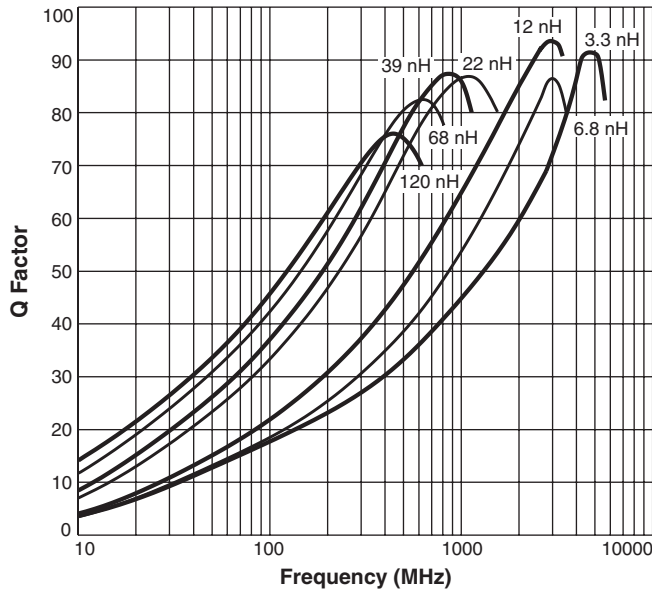
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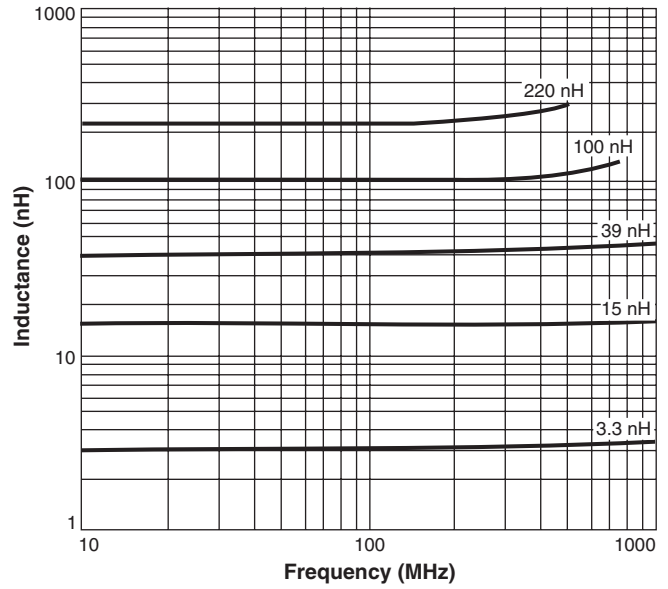
# 0805HS Series (2012)

## Typical Q vs Frequency

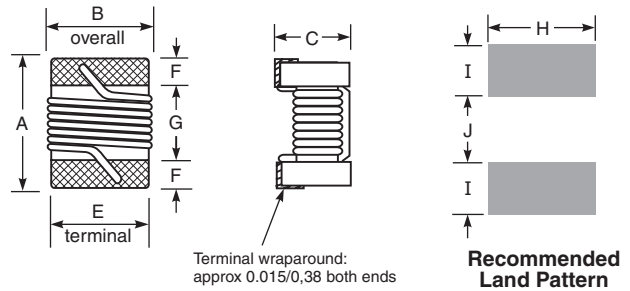
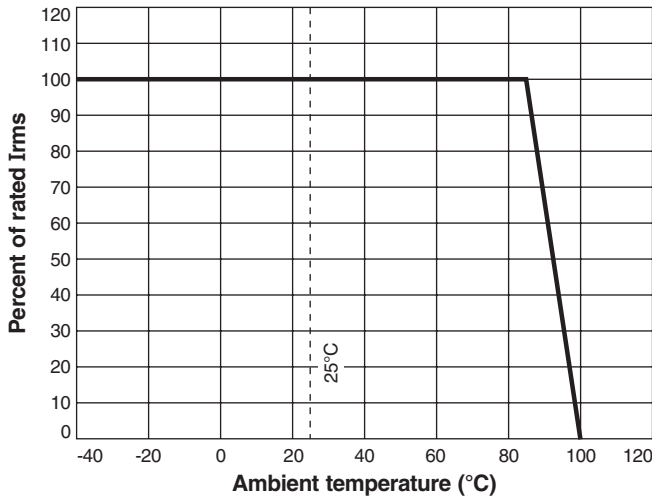


**S-Parameter files**  
ON OUR WEB SITE  
**SPICE models**  
ON OUR WEB SITE

## 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

**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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