



# Chip Inductors – 0805LS (2012)

These ferrite core surface mount inductors have lower DCR and higher current ratings than our 0805CS Series. They come in inductance values from 0.078 to 27  $\mu$ H.

Coilcraft **Designer's Kit C354** contains samples of all 5% inductance tolerance parts. To order, contact Coilcraft or visit <http://order.coilcraft.com> to purchase on-line.

Part number <sup>1</sup>	Inductance <sup>2</sup> ( $\mu$ H)	Percent tolerance	Q min <sup>3</sup>	SRF min <sup>4</sup> (MHz)	DCR max <sup>5</sup> (Ohms)	Irms <sup>6</sup> (A)	Color code
0805LS-78NX_R_	0.078 @ 7.9 MHz	<b>5,2</b>	19 @ 7.9 MHz	1440	0.042	2.0	Black
0805LS-111X_R_	0.110 @ 7.9 MHz	<b>5,2</b>	19 @ 7.9 MHz	1200	0.05	2.0	Brown
0805LS-471X_R_	0.470 @ 7.9 MHz	<b>5,2</b>	19 @ 7.9 MHz	500	0.31	0.720	Red
0805LS-681X_R_	0.680 @ 7.9 MHz	<b>5,2</b>	20 @ 7.9 MHz	400	0.46	0.590	Orange
0805LS-102X_R_	1.0 @ 7.9 MHz	<b>5,2</b>	20 @ 7.9 MHz	340	0.69	0.500	Yellow
0805LS-122X_R_	1.2 @ 7.9 MHz	<b>5,2</b>	15 @ 7.9 MHz	280	1.20	0.400	Brown
0805LS-152X_R_	1.5 @ 7.9 MHz	<b>5,2</b>	20 @ 7.9 MHz	275	1.03	0.490	Green
0805LS-182X_R_	1.8 @ 7.9 MHz	<b>5,2</b>	20 @ 7.9 MHz	246	1.15	0.410	Blue
0805LS-222X_R_	2.2 @ 7.9 MHz	<b>5,2</b>	20 @ 7.9 MHz	106	1.28	0.365	Brown
0805LS-272X_R_	2.7 @ 7.9 MHz	<b>5,2</b>	20 @ 7.9 MHz	105	1.48	0.350	Violet
0805LS-332X_R_	3.3 @ 7.9 MHz	<b>5,2</b>	20 @ 7.9 MHz	83	1.57	0.330	Gray
0805LS-392X_R_	3.9 @ 7.9 MHz	<b>5,2</b>	20 @ 7.9 MHz	52	1.70	0.300	White
0805LS-472X_R_	4.7 @ 7.9 MHz	<b>5,2</b>	20 @ 7.9 MHz	50	1.87	0.280	Black
0805LS-682X_R_	6.8 @ 7.9 MHz	<b>5,2</b>	20 @ 7.9 MHz	35	2.25	0.260	Brown
0805LS-822X_R_	8.2 @ 2.5 MHz	<b>5,2</b>	18 @ 2.5 MHz	27	2.55	0.250	Red
0805LS-103X_R_	10.0 @ 2.5 MHz	<b>5,2</b>	18 @ 2.5 MHz	21	3.45	0.200	Orange
0805LS-153X_R_	15.0 @ 2.5 MHz	<b>5,2</b>	18 @ 2.5 MHz	17	5.03	0.180	Yellow
0805LS-223X_R_	22.0 @ 2.5 MHz	<b>5,2</b>	18 @ 2.5 MHz	13	6.18	0.150	Green
0805LS-273X_R_	27.0 @ 2.5 MHz	<b>5,2</b>	15 @ 2.5 MHz	11	11.04	0.120	Blue

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

**0805LS-273XJRC**

- Tolerance:** **G** = 2% **J** = 5%  
(Table shows stock tolerances in bold.)
- Termination:** **R** = RoHS compliant matte tin over nickel over silver-platinum-glass frit.  
**E** = Halogen free component. RoHS compliant silver-palladium-platinum-glass frit terminations.  
**L** = RoHS compliant, not halogen-free. 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:** **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.
- Q measured on an Agilent/HP 4291A with an Agilent/HP 16193 test fixture.
- SRF measured using an Agilent/HP 8753D network analyzer with a Coilcraft SMD-D test fixture.
- DCR measured on a Cambridge Technology Micro-ohmmeter.
- Current that causes a 15°C temperature rise from 25°C ambient. Because of their open construction, these parts will not saturate. 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.

**Core material** Ceramic/Ferrite

**Environmental** RoHS compliant, halogen free

**Terminations** RoHS compliant matte tin over nickel over silver platinum-glass frit. Other terminations available at additional cost.

**Weight** 12.7– 13.9 mg

**Ambient temperature** –40°C to +85°C with Irms current

**Maximum part temperature** +100°C (ambient + temp rise).

**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)** +100 to +250 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, 1.6 mm pocket depth

**PCB washing** Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787\\_PCB\\_Washing.pdf](#).

**S-Parameter files**

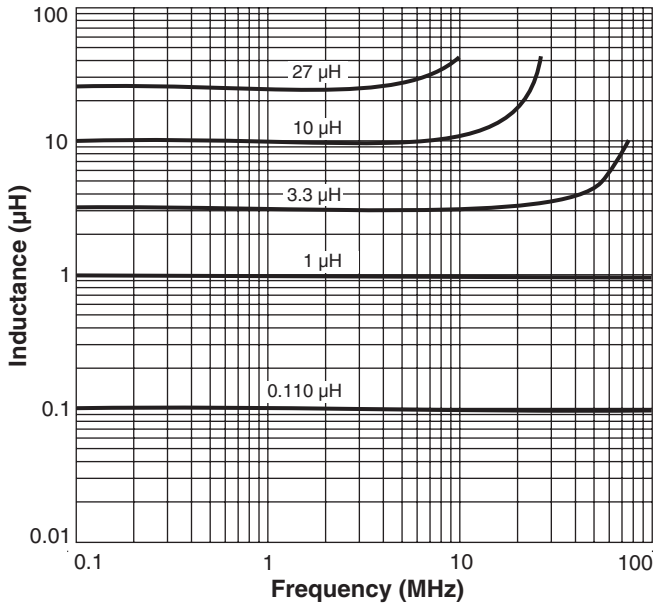
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**SPICE models**

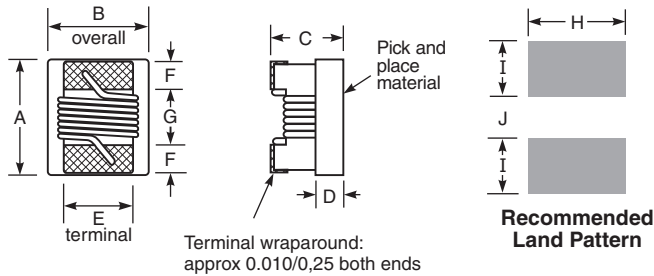
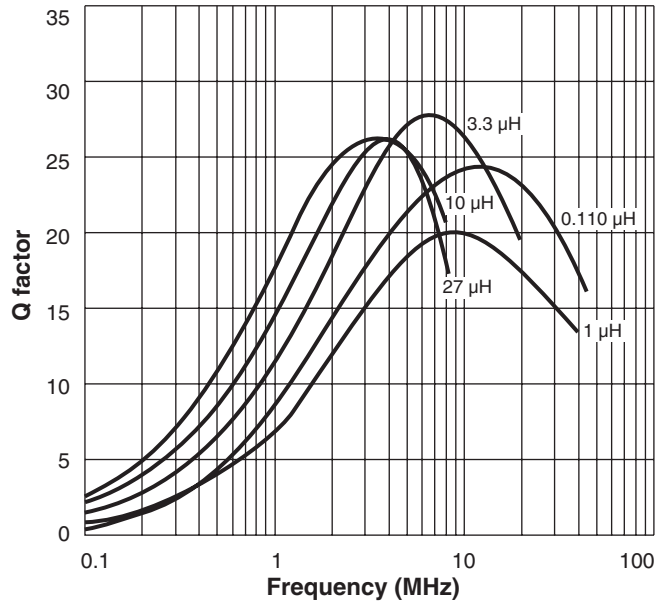
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# 0805LS Series Chip Inductors

## Typical L vs Frequency



## Typical Q vs Frequency



A	B	C	D	E	F	G	H	I	J
max	max	max	ref						
0.090	0.075	0.063	0.020	0.050	0.020	0.040	0.070	0.040	0.030
2,29	1,91	1,60	0,51	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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Document 288-2 Revised 08/08/22

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