

# 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_L_	0.078 @ 7.9 MHz	<b>5,2</b>	19 @ 7.9 MHz	1440	0.042	2.0	Black
0805LS-111X_L_	0.110 @ 7.9 MHz	<b>5,2</b>	19 @ 7.9 MHz	1200	0.05	2.0	Brown
0805LS-471X_L_	0.470 @ 7.9 MHz	<b>5,2</b>	19 @ 7.9 MHz	500	0.31	0.720	Red
0805LS-681X_L_	0.680 @ 7.9 MHz	<b>5,2</b>	20 @ 7.9 MHz	400	0.46	0.590	Orange
0805LS-102X_L_	1.0 @ 7.9 MHz	<b>5,2</b>	20 @ 7.9 MHz	340	0.69	0.500	Yellow
0805LS-122X_L_	1.2 @ 7.9 MHz	<b>5,2</b>	15 @ 7.9 MHz	280	1.20	0.400	Brown
0805LS-152X_L_	1.5 @ 7.9 MHz	<b>5,2</b>	20 @ 7.9 MHz	275	1.03	0.490	Green
0805LS-182X_L_	1.8 @ 7.9 MHz	<b>5,2</b>	20 @ 7.9 MHz	246	1.15	0.410	Blue
0805LS-222X_L_	2.2 @ 7.9 MHz	<b>5,2</b>	20 @ 7.9 MHz	106	1.28	0.365	Brown
0805LS-272X_L_	2.7 @ 7.9 MHz	<b>5,2</b>	20 @ 7.9 MHz	105	1.48	0.350	Violet
0805LS-332X_L_	3.3 @ 7.9 MHz	<b>5,2</b>	20 @ 7.9 MHz	83	1.57	0.330	Gray
0805LS-392X_L_	3.9 @ 7.9 MHz	<b>5,2</b>	20 @ 7.9 MHz	52	1.70	0.300	White
0805LS-472X_L_	4.7 @ 7.9 MHz	<b>5,2</b>	20 @ 7.9 MHz	50	1.87	0.280	Black
0805LS-682X_L_	6.8 @ 7.9 MHz	<b>5,2</b>	20 @ 7.9 MHz	35	2.25	0.260	Brown
0805LS-822X_L_	8.2 @ 2.5 MHz	<b>5,2</b>	18 @ 2.5 MHz	27	2.55	0.250	Red
0805LS-103X_L_	10.0 @ 2.5 MHz	<b>5,2</b>	18 @ 2.5 MHz	21	3.45	0.200	Orange
0805LS-153X_L_	15.0 @ 2.5 MHz	<b>5,2</b>	18 @ 2.5 MHz	17	5.03	0.180	Yellow
0805LS-223X_L_	22.0 @ 2.5 MHz	<b>5,2</b>	18 @ 2.5 MHz	13	6.18	0.150	Green
0805LS-273X_L_	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-273XJLC**

- Tolerance:** **G** = 2% **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:** **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.

2. Inductance measured using a Coilcraft SMD-A fixture in an Agilent/HP 4286A impedance analyzer with Coilcraft-provided correlation pieces.
3. Q measured on an Agilent/HP 4291A with an Agilent/HP 16193 test fixture.
4. SRF measured using an Agilent/HP 8753D network analyzer with a Coilcraft SMD-D test fixture.
5. DCR measured on a Cambridge Technology Micro-ohmmeter.
6. Current that causes a 15°C temperature rise from 25°C ambient. Because of their open construction, these parts will not saturate.
7. Electrical specifications at 25°C.

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

**Core material** Ceramic/Ferrite

**Environmental** RoHS compliant, halogen free optional

**Terminations** RoHS compliant silver-palladium-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, +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)** +100 to +250 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; Plastic tape: 8 mm wide, 0.23 mm thick, 4 mm pocket spacing, 1.6 mm pocket depth

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



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**S-Parameter files**

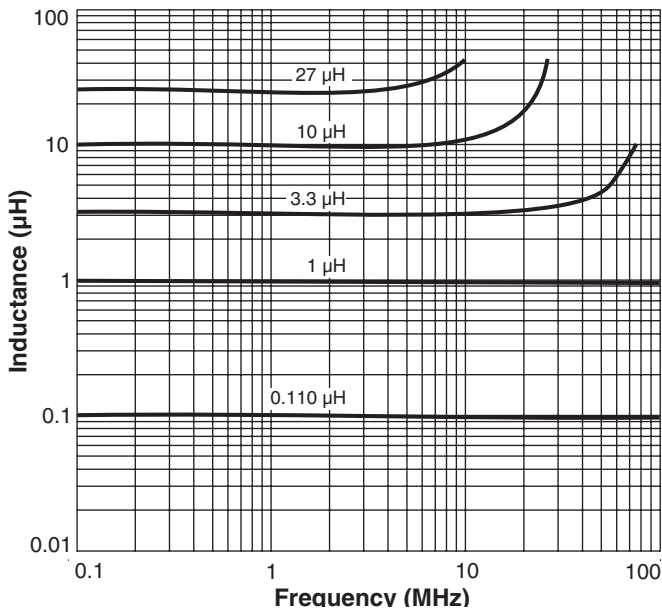
ON OUR WEB SITE

**SPICE models**

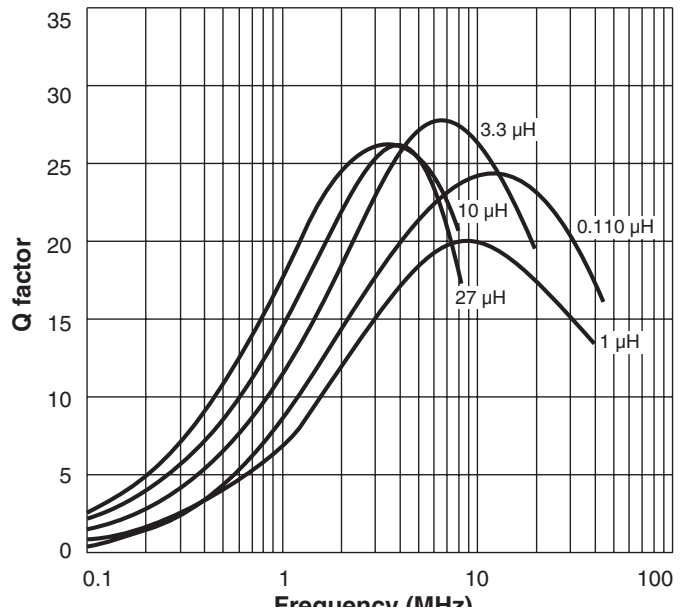
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# 0805LS Series Chip Inductors

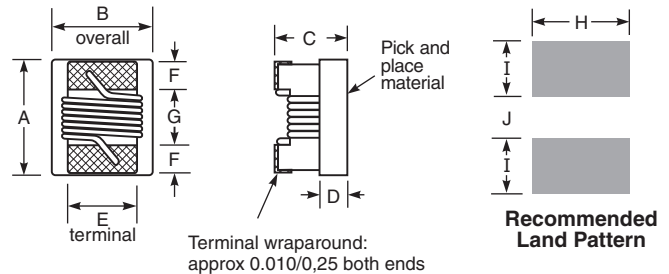
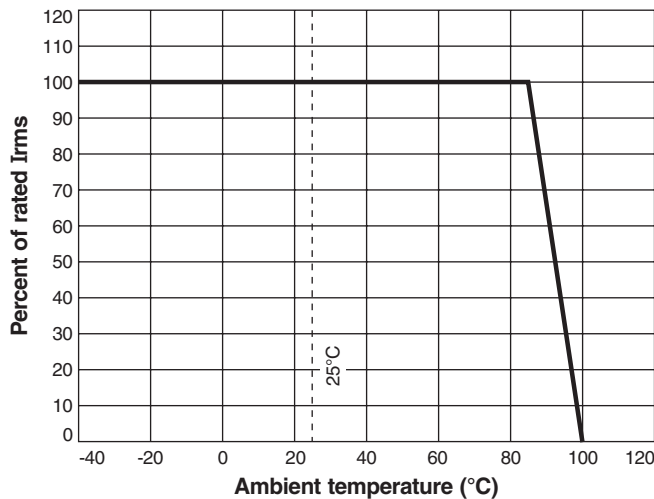
## Typical L vs Frequency



## Typical Q vs Frequency



## Irms Derating



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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