



# 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><br>( $\mu$ H) | Percent<br>tolerance | Q min <sup>3</sup> | SRF min <sup>4</sup><br>(MHz) | DCR max <sup>5</sup><br>(Ohms) | Irms <sup>6</sup><br>(A) | Color<br>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** Only pure water or alcohol recommended



[www.coilcraft.com](http://www.coilcraft.com)

**US** +1-847-639-6400 [sales@coilcraft.com](mailto:sales@coilcraft.com)  
**UK** +44-1236-730595 [sales@coilcraft-europe.com](mailto:sales@coilcraft-europe.com)  
**Taiwan** +886-2-2264 3646 [sales@coilcraft.com.tw](mailto:sales@coilcraft.com.tw)  
**China** +86-21-6218 8074 [sales@coilcraft.com.cn](mailto:sales@coilcraft.com.cn)  
**Singapore** + 65-6484 8412 [sales@coilcraft.com.sg](mailto:sales@coilcraft.com.sg)

Document 288-1 Revised 01/18/12

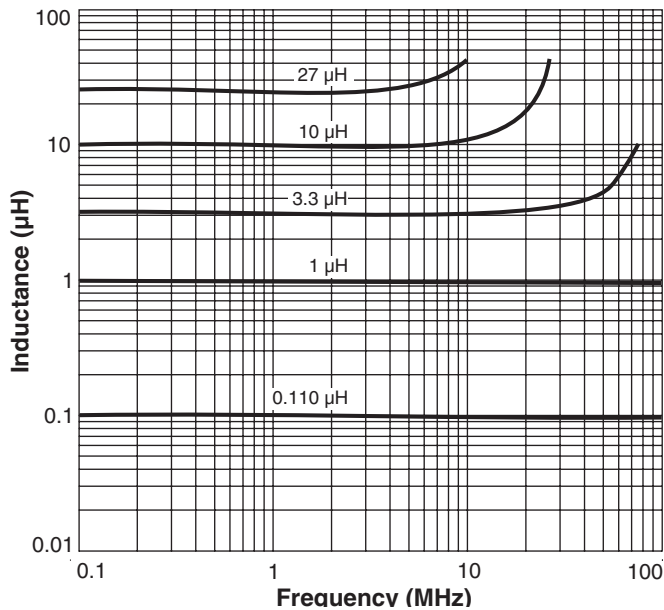
© Coilcraft Inc. 2012

This product may not be used in medical or high risk applications without prior Coilcraft approval. Specification subject to change without notice. Please check out web site for latest information.

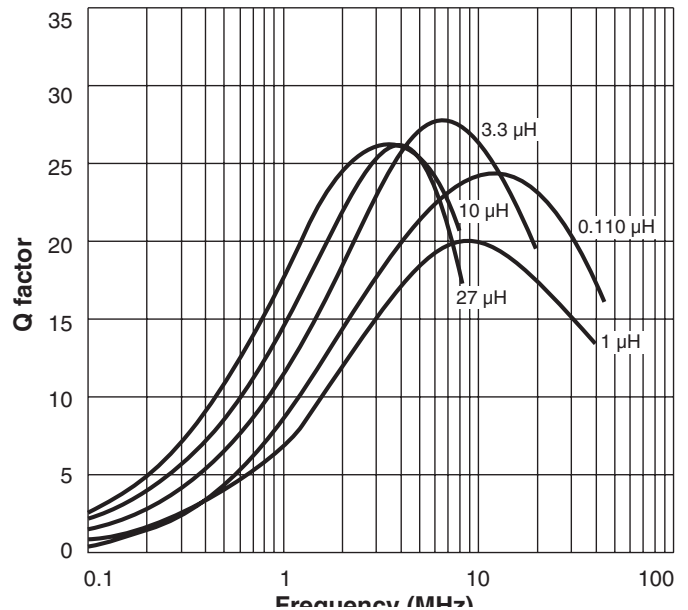


# 0805LS Series Chip Inductors

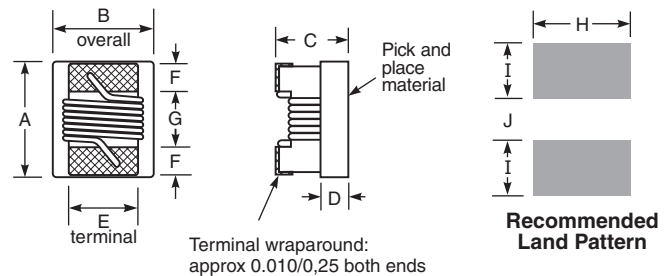
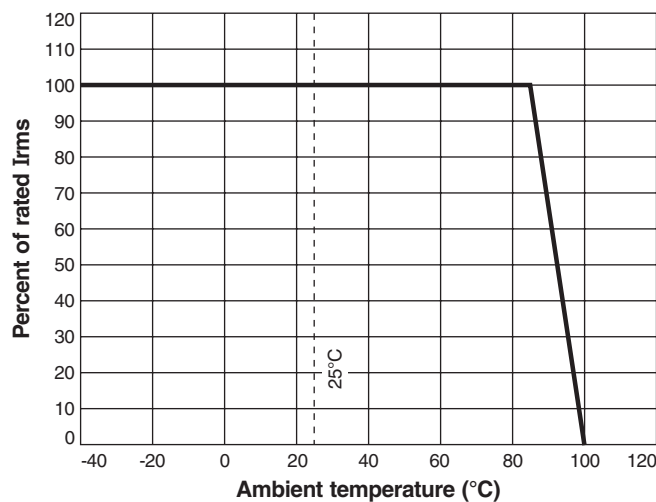
## Typical L vs Frequency



## 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 inches |
| 2,29  | 1,91  | 1,60  | 0,51  | 1,27  | 0,51  | 1,02  | 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.