

# Chip Inductors – 1812LS Series (4532)

With inductance values up to 1000  $\mu$ H, these are our highest rated chip inductors. Their ferrite core allows higher current ratings and lower DC resistance.

Coilcraft **Designer's Kit C114** contains samples of all 5% tolerance parts. To order, contact Coilcraft or purchase online at <http://order.coilcraft.com>.

Part number <sup>1</sup>	Inductance <sup>2</sup> ( $\mu$ H)	Percent tolerance <sup>3</sup>	Q min <sup>4</sup>	Test freq (MHz)	SRF typ <sup>5</sup> (MHz)	DCR max <sup>6</sup> (Ohms)	Irms <sup>7</sup> (mA)
1812LS-123X_B_	12	10, <b>5</b>	42	2.5	85	2.0	310
1812LS-153X_B_	15	10, <b>5</b>	42	2.5	70	2.5	290
1812LS-183X_B_	18	10, <b>5</b>	45	2.5	52	2.8	270
1812LS-223X_B_	22	10, <b>5</b>	45	2.5	58	3.2	260
1812LS-273X_B_	27	10, <b>5</b>	45	2.5	46	3.6	240
1812LS-333X_B_	33	10, <b>5</b>	45	2.5	40	4.0	230
1812LS-393X_B_	39	10, <b>5</b>	45	2.5	30	4.5	210
1812LS-473X_B_	47	10, <b>5</b>	42	2.5	24	5.0	200
1812LS-563X_B_	56	10, <b>5</b>	42	2.5	20	5.5	190
1812LS-683X_B_	68	10, <b>5</b>	40	2.5	16	6.0	180
1812LS-823X_B_	82	10, <b>5</b>	40	2.5	13.5	7.0	170
1812LS-104X_B_	100	10, <b>5</b>	40	2.5	12.0	8.0	150
1812LS-124X_B_	120	10, <b>5</b>	33	0.79	14.5	11.5	135
1812LS-154X_B_	150	10, <b>5</b>	36	0.79	11.5	13.0	125
1812LS-184X_B_	180	10, <b>5</b>	36	0.79	9.3	14.2	120
1812LS-224X_B_	220	10, <b>5</b>	38	0.79	7.6	16.2	115
1812LS-274X_B_	270	10, <b>5</b>	38	0.79	8.3	20.5	105
1812LS-334X_B_	330	10, <b>5</b>	38	0.79	7.0	22.5	100
1812LS-394X_B_	390	10, <b>5</b>	38	0.79	5.2	24.5	90
1812LS-474X_B_	470	10, <b>5</b>	38	0.79	4.4	26.5	85
1812LS-564X_B_	560	10, <b>5</b>	33	0.79	2.8	28.5	75
1812LS-684X_B_	680	10, <b>5</b>	33	0.79	2.3	38.0	60
1812LS-824X_B_	820	10, <b>5</b>	30	0.79	2.1	41.0	55
1812LS-105X_B_	1000	10, <b>5</b>	30	0.79	1.9	44.0	50

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

1812LS-105X**J**B**C**

**Tolerance:** J = 5% K = 10%

(Table shows stock tolerances in bold.)

**Packaging:** C = 7" machine-ready reel. EIA-481 embossed plastic tape (600 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. Factory order only, not stocked (2200 per full reel).

2. Inductance at 2.5 MHz measured using an Agilent/HP 4286A and a Coilcraft SMD-A fixture with Coilcraft-provided correlation pieces. Inductance at 0.79 MHz measured using an Agilent/HP 4192A and Coilcraft SMD-B test fixture.

3. Tolerances in bold are stocked for immediate shipment.

4. Q read at test frequency directly on an Agilent/HP 4192A LF impedance analyzer and a Coilcraft SMD-B test fixture.

5. SRF measured using an Agilent/HP 8753D network analyzer and a Coilcraft SMD-D test fixture.

6. DCR measured on a Cambridge Technology micro-ohmmeter.

7. Average current for 15°C temperature rise from 25°C.

8. Operating temperature range -40°C to +85°C.

9. Electrical specifications at 25°C.

See Qualification Standards section for environmental and test data.

See Color Coding section for part marking data.

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

**Coilcraft**<sup>®</sup>

Specifications subject to change without notice.

Please check our website for latest information.

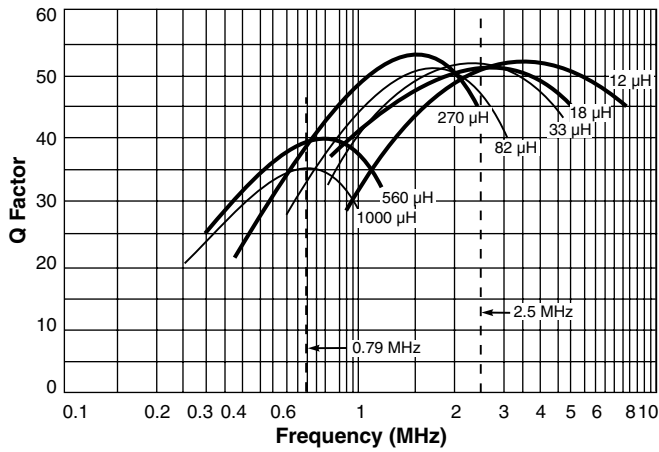
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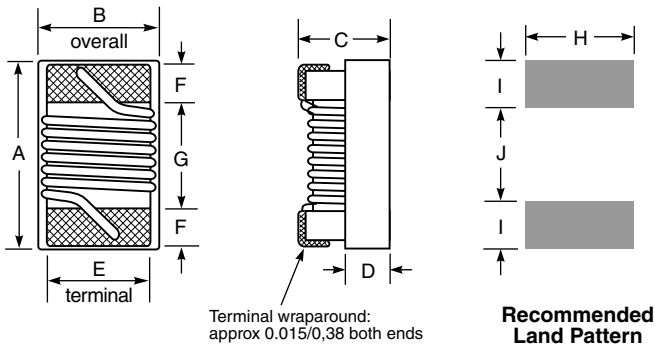
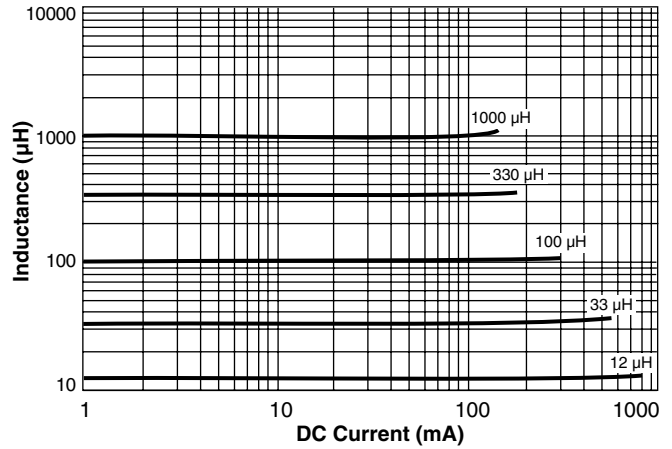
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# 1812LS (4532) Chip Inductors

## Typical Q vs Frequency



## Typical L vs Current



A max	B max	C max	D ref	E	F	G	H	I	J
0.195	0.150	0.135	0.070	0.100	0.025	0.128	0.120	0.045	0.118
4,95	3,81	3,43	1,78	2,54	0,64	3,25	3,05	1,14	3,00

**Weight:** 142 – 171 mg  
**Terminations:** Platinum/palladium/silver  
**Tape and reel:** 600/7" reel; 2200/13" reel 12 mm tape width  
 For packaging data see Tape and Reel Specifications section.

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



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 Please check our website for latest information. Document 106-2 Revised 12/14/04

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