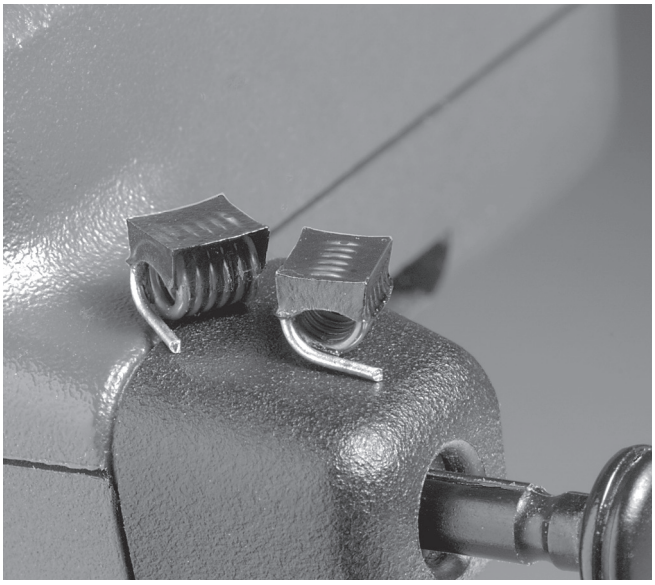
Midi Spring® Air Core Inductors



- Air core inductors feature high Q and current handling
- Acrylic top provides a flat surface for pick and place
- Solder coated leads ensure reliable soldering

Weight 0.10 – 0.16 g

Terminations RoHS compliant tin-silver over copper. Other terminations available at additional cost.

Ambient temperature –40°C to +125°C with Irms current, +125°C to +140°C with derated current

Storage temperature Component: –40°C to +140°C. 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) +5 to +70 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 500/7″ reel; 2000/13″ reel Plastic tape: 12 mm wide, 0.3 mm thick, 8 mm pocket spacing, 4.2 mm pocket depth

PCB washing Only pure water or alcohol recommended

Part number[1]	Inductance[2] (nH)	Percent tolerance[3]	Q[4] typ	Q[4] min	Test freq. (MHz)	SRF min[5] (GHz)	DCR max[6] (mOhm)	Irms[7] (A)
1812SMS-22N_L_	22	**5,2**	135	100	150	3.2	4.2	3.0
1812SMS-27N_L_	27	**5,2**	135	100	150	2.7	4.0	3.5
1812SMS-33N_L_	33	**5,2**	130	100	150	2.5	4.8	3.0
1812SMS-39N_L_	39	**5,2**	135	100	150	2.1	4.4	3.0
1812SMS-47N_L_	47	**5,2**	135	100	150	2.1	5.6	3.0
1812SMS-56N_L_	56	**5,2**	125	100	150	1.5	6.2	3.0
1812SMS-68N_L_	68	**5,2**	120	100	150	1.5	8.2	2.5
1812SMS-82N_L_	82	**5,2**	120	100	150	1.3	9.4	2.5
1812SMS-R10_L_	100	**5,2**	115	100	150	1.2	12.3	1.7
1812SMS-R12_L_	120	**5,2**	125	100	150	1.1	17.3	1.5
1812SMS-R15_L_	150	**5,2**	145	100	150	0.75	33.0	1.2

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

1812SMS-R12GLC

Tolerance: **G** = 2% **J** = 5%

Termination: **L** = RoHS compliant tin-silver (96.5/3.5) over copper. 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, 500 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. Factory order only, not stocked, 2000 parts per full reel.

2. Inductance tested at 150 MHz on an Agilent/HP 4286A LCR meter or equivalent with a Coilcraft SMD-A test fixture and correlation.
3. Tolerances in bold are stocked for immediate shipment.
4. Q tested at 150 MHz on an Agilent/HP 4291A Impedance Analyzer with an Agilent/HP 16193 test fixture or equivalents.
5. SRF tested on the Agilent/HP 8753D Network Analyzer or equivalent and a Coilcraft CCF1248 test fixture.
6. DCR tested on the Cambridge Technology Model 510 Micro-ohmmeter or equivalent.
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.

For part marking data see www.coilcraft.com/colrcode.cfm.

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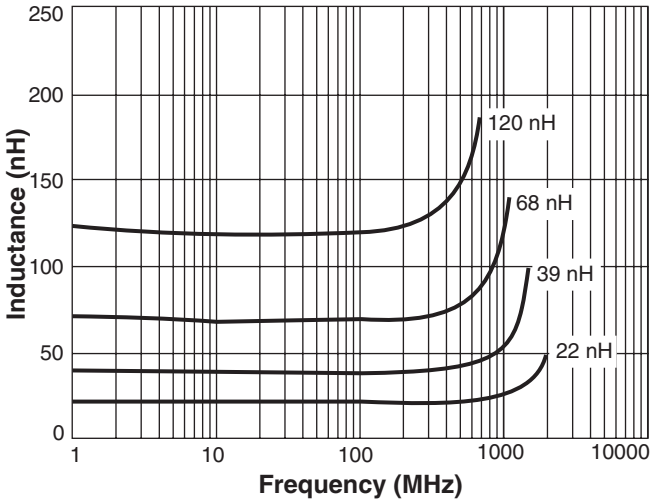
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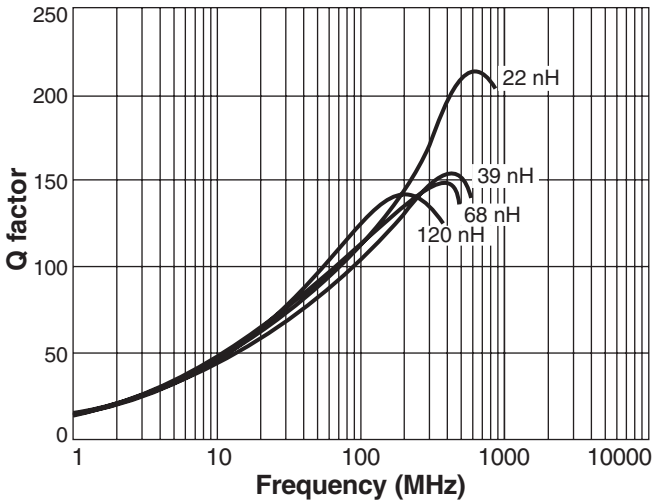
Designer's Kit C318 contains 12 each of all 5% values.
Designer's Kit C318-2 contains12 each of all 2% values.

Midi Spring® Air Core Inductors

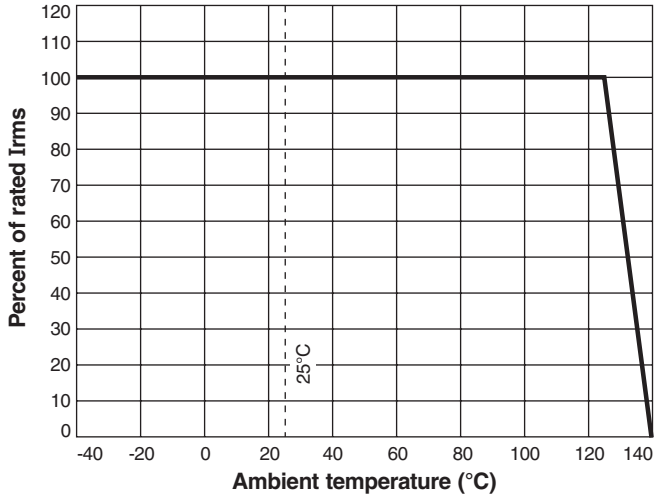
Typical L vs Frequency



Typical Q vs Frequency

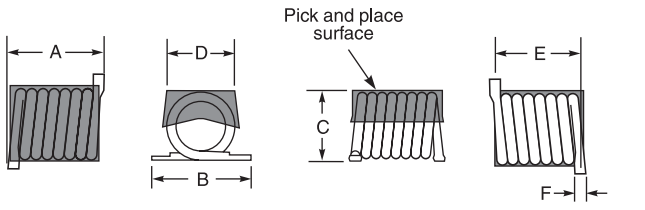


Irms Derating



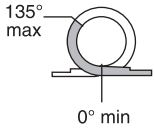
S-Parameter files
ON OUR WEB SITE

SPICE models
ON OUR WEB SITE

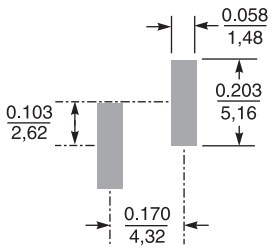


A max	B max	C max	D	E	F max
0.195 4,95	0.250 6,35	0.165 4,20	0.140 ±0.010 3,56 ±0,25	0.170 ±0.015 4,32 ±0,38	0.030 0,76

Strip Length



Recommended Land Pattern



Dimensions are in inches / mm

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