



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 ² typ	Q ² min	Test freq. (MHz)	SRF min ⁴ (GHz)	DCR max ⁵ (mOhm)	Irms ⁶ (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-R12 **G** **L** **C**

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 and Q tested on the Agilent/HP 4291A with the 16193 fixture and correlation.

3. Tolerances in bold are stocked for immediate shipment.

4. SRF tested on the Agilent/HP 8753D and the SMD-D test fixture.

5. DCR tested on the Cambridge Technology Model 510 Micro-ohmmeter.

6. Current that causes a 15°C temperature rise from 25°C ambient.

7. Electrical specifications at 25°C.

Refer to Doc 362 "Soldering Surface Mount Components" before soldering.
For part marking data see Color Coding section.

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Specifications subject to change without notice.
Please check our website for latest information.

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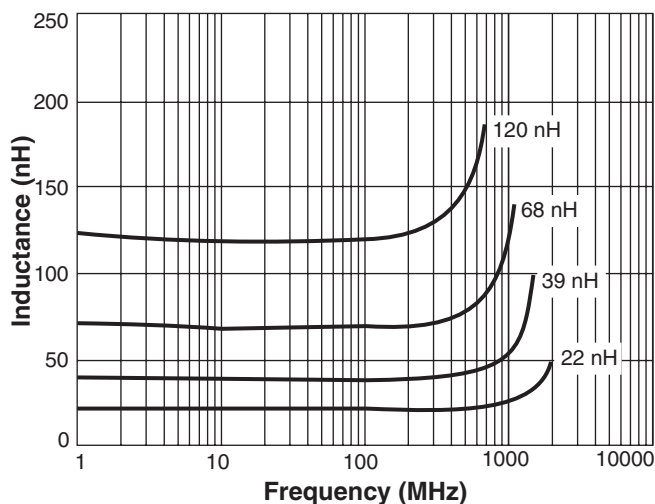
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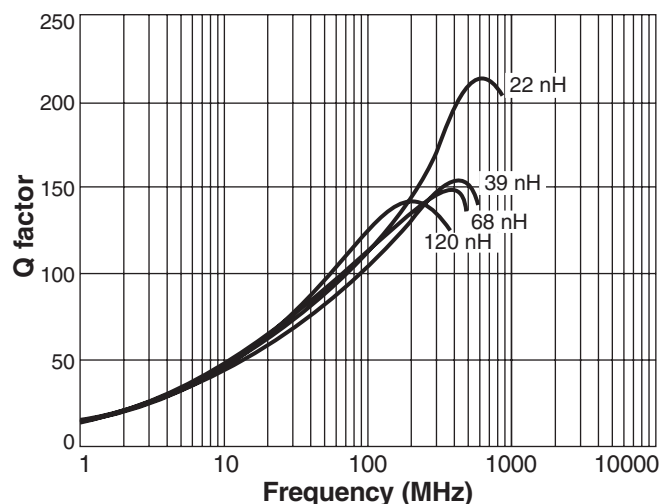


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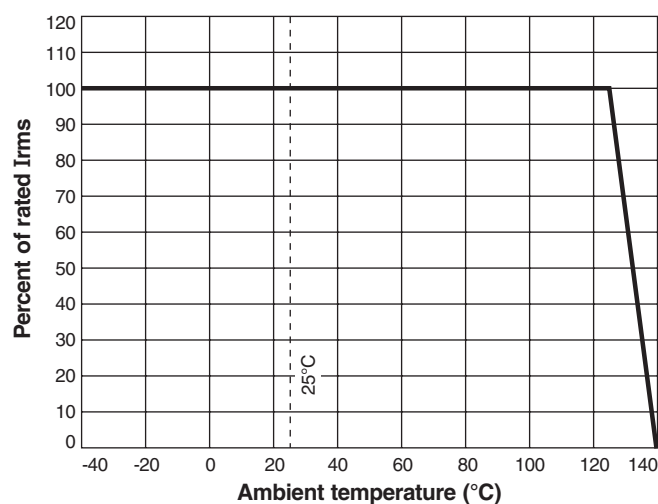
Typical L vs Frequency



Typical Q vs Frequency

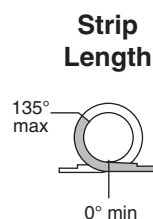
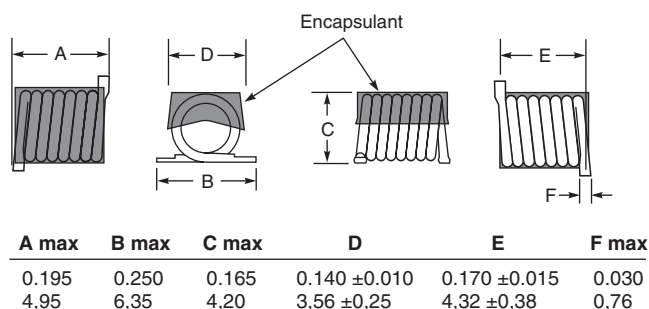


Irms Derating



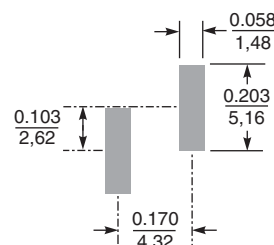
S-Parameter files
ON OUR WEB SITE OR CD

SPICE models
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Dimensions are in $\frac{\text{inches}}{\text{mm}}$

Recommended Land Pattern



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