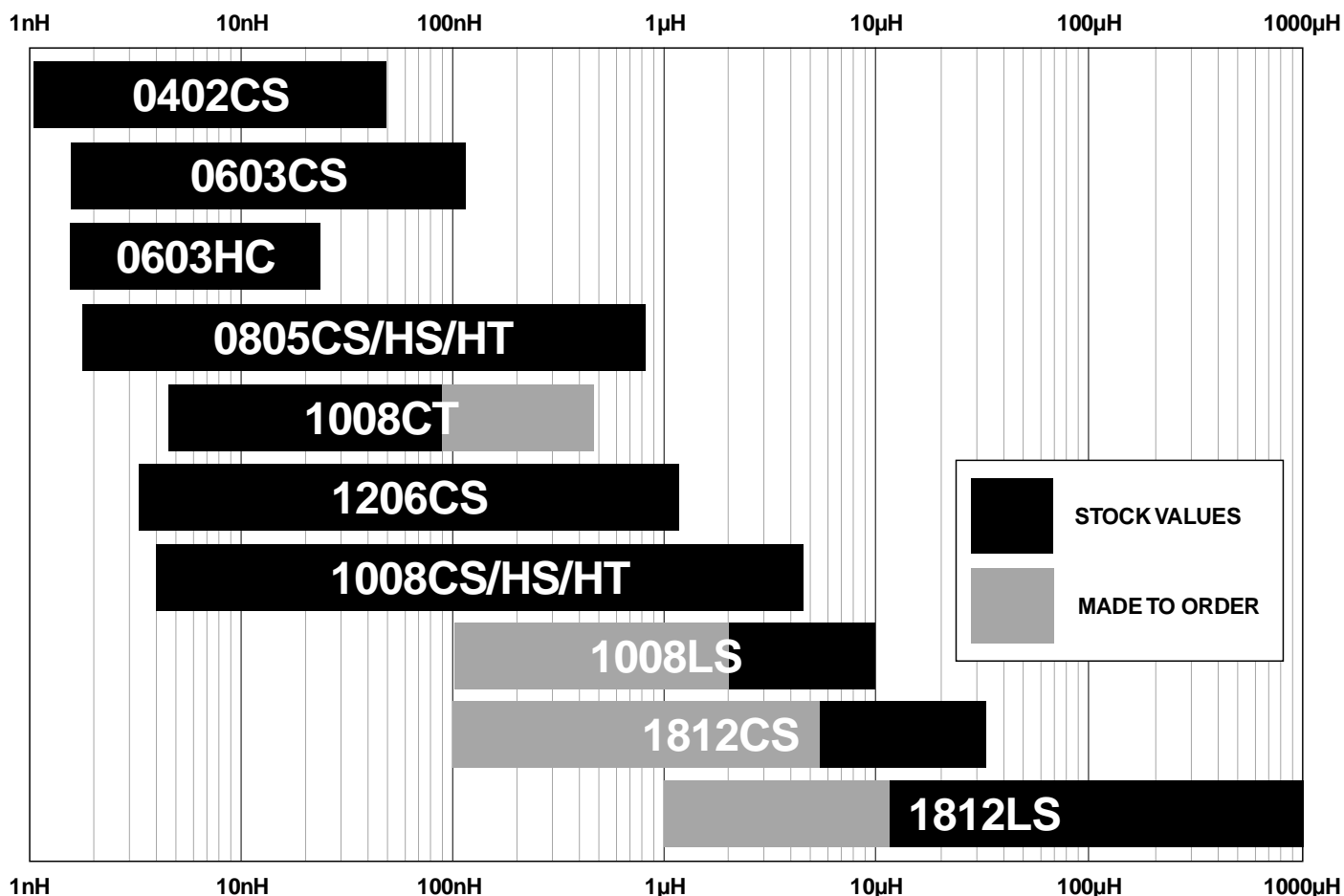


# Chip Inductor Selection Guide



Use this chart to determine which family provides the inductance you need. Follow these tips to select the best combination of low cost, close tolerance and high self resonance.

#### Try our CS families first

These offer the best overall combination of low cost, close tolerance, and high self resonant frequency.

#### High frequency applications

Series ending in CS, CT, HQ, HS, or HT use a ceramic core. They have the highest self resonant frequencies in the industry. And they're free from the batch-to-batch variations in inductance, SRF and Q that are typical of ferrite inductors.

#### Close tolerance applications

Because of their ceramic coil forms, we are able to produce 0805CS, 1008CS, and 1206CS inductors to 1% or 2% tolerance very economically. This can often eliminate the need for variable components in tuned circuits and oscillators.

#### Small footprint/low profile

For maximum space saving, try our 0402CS or 0603CS Series, our smallest wirewound inductors. Or if you need a low-profile part, use our 0805HT parts, which measure only .035"/0,89 mm high.

#### Highest possible Q

Among our ceramic chip inductors, the 0805HQ and 1008HQ Series

offer the highest Q factors. For even higher ratings, consider our air wound "Springs". You get all the convenience of a surface mount part, plus Q values of 200 at 1.8 GHz and inductance tolerance as low as 2%!

#### High current

The 0603HC, 0805HQ and 1008HQ Series provide the highest current carrying capability.

#### Custom values







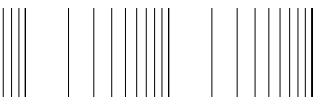
We also welcome the opportunity to provide parts tailored to your needs. For technical assistance, call +1-847-639-6400 (US) or +44-1236-730595 (UK).

# Coilcraft

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1102 Silver Lake Road Cary, Illinois 60013 Phone 847/639-6400 Fax 847/639-1469  
E-mail [info@coilcraft.com](mailto:info@coilcraft.com) Web <http://www.coilcraft.com>

# SMT Power Inductor Selection Guide

UNSHIELDED INDUCTORS		Inductance/Isat
<b>LPO1704 Series</b> 1.00 mm high 	1.2 $\mu$ H 330 $\mu$ H 2.1 A 0.13 A	
<b>LPO2506 Series</b> 1.19 mm high 	4.7 $\mu$ H 1,000 $\mu$ H 1.6 A 0.1 A	
<b>DO1606 Series</b> 2.0 mm high 	1 $\mu$ H 1,000 $\mu$ H 2.5 A 0.08 A	
<b>DO1608 Series</b> 2.92 mm high 	1 $\mu$ H 1,000 $\mu$ H 2.9 A 0.1 A	
<b>DO1813HC Series</b> 5.00 mm high 	0.56 $\mu$ H 47 $\mu$ H 7.7 A 0.87 A	
<b>DO3308 Series</b> 3.00 mm high 	10 $\mu$ H 1,000 $\mu$ H 2.4 A 0.1 A	
<b>DO3316 Series</b> 5.21 mm high 	1 $\mu$ H 1,000 $\mu$ H 9 A 0.3 A	
<b>DO3316HC Series</b> 6.35 mm high 	0.33 4.7 $\mu$ H 20 A 5.4 A	







All parts shown actual size

# Coilcraft



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 E-mail info@coilcraft.com Web http://www.coilcraft.com

# SMT Power Inductor Selection Guide

SHIELDED INDUCTORS		Inductance/Isat	
<b>1008PS Series</b>	2.6 mm high		
		1 $\mu$ H 3 A	1,000 $\mu$ H 0.1 A
<b>DS1608 Series</b>	2.92 mm high		
		1 $\mu$ H 3 A	10,000 $\mu$ H 0.02 A
<b>DT1608 Series</b>	2.92 mm high		
		1 $\mu$ H 2 A	1,000 $\mu$ H 0.08 A
<b>DS3316 Series</b>	5.08 mm high		
		1 $\mu$ H 5.6 A	47 $\mu$ H 1 A
<b>DT3316 Series</b>	5.08 mm high		
		1 $\mu$ H 5 A	1,000 $\mu$ H 0.25 A
<b>DS5022 Series</b>	7.62 mm high		
		10 $\mu$ H 8 A	1,000 $\mu$ H 0.8 A

All parts shown actual size

BACKLIGHT INDUCTORS		Inductance/Isat	
<b>DO1607BL Series</b>	2.49 mm high		
		1 6.8 mH 0.1 0.04 A	
<b>DS1608BL Series</b>	2.92 mm high		
		0.1 mH 0.22 A	10 mH 0.01 A

# Coilcraft

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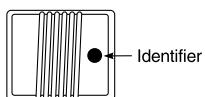
1102 Silver Lake Road Cary, Illinois 60013 Phone 847/639-6400 Fax 847/639-1469  
E-mail info@coilcraft.com Web http://www.coilcraft.com

# Color Coding

## Chip Inductors

### 0603 and 0805 Series

Because of their small size, these parts are marked with a single color dot. The inductance value represented by the dot is shown on the data sheet for each series.



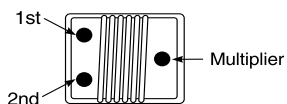
### 1008, 1206 and 1812 Series

These parts are marked with three color dots. The table below shows the significance of each color.

Dots 1 and 2 indicate the inductance in nanoHenries

Dot 3 is a multiplier showing the number of added zeroes

0 = Black	5 = Green
1 = Brown	6 = Blue
2 = Red	7 = Violet
3 = Orange	8 = Gray
4 = Yellow	9 = White



#### Examples:

Gray Red Black	=	82 nH
Brown Red Brown	=	120 nH
Yellow Violet Red	=	4700 nH

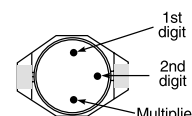
## SMD Power Inductors

Most Coilcraft SMD power inductors are marked with three color dots. The table below shows the significance of each color.

Dots 1 and 2 indicate the inductance in nanoHenries.

Dot 3 is a multiplier showing the number of added zeroes

0 = Black	5 = Green
1 = Brown	6 = Blue
2 = Red	7 = Violet
3 = Orange	8 = Gray
4 = Yellow	9 = White



#### Examples:

Yellow Violet Yellow	=	470 $\mu$ H
Brown Green Orange	=	15 $\mu$ H
Blue Grey Brown	=	680 nH

On values below 10 nH, the third dot is not a multiplier. Refer to the tables below for the specific inductance values represented by the color dots.

### 1008CT Series

Black Yellow Black	4.7 nH	1008CT-040X_BC
Black Gray Black	8.2 nH	1008CT-080X_BC

### 1008HT Series

Black Orange Black	3.3 nH	1008HT-3N3T_BC
Black Blue Black	6.8 nH	1008HT-6N8T_BC
Black Violet Black	7.2 nH	1008HT-7N2T_BC

### 1008HQ Series

Black Orange Black	3.0 nH	1008HQ-3N0T_BC
Black Yellow Black	4.1 nH	1008HQ-4N1T_BC
Black Violet Black	7.8 nH	1008HQ-7N8T_BC

### 1206CS Series

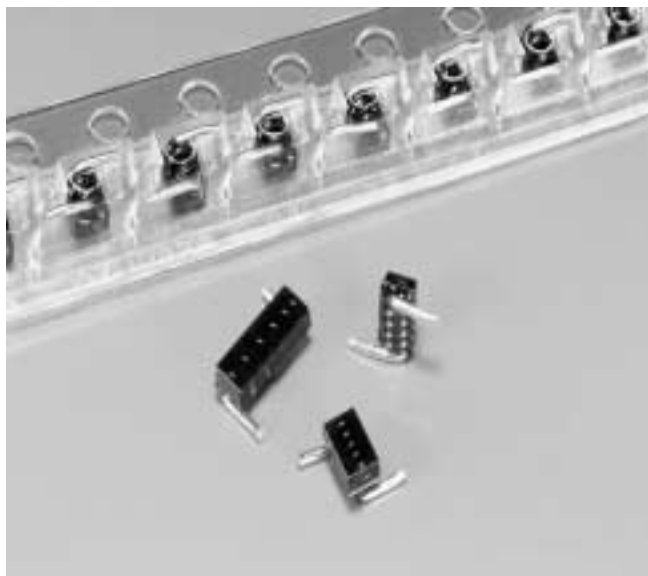
Black Orange Black	3.3 nH	1206CS-030T_BC
Black Blue Black	6.8 nH	1206CS-060T_BC

# Coilcraft

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1102 Silver Lake Road Cary, Illinois 60013 Phone 847/639-6400 Fax 847/639-1469  
E-mail [info@coilcraft.com](mailto:info@coilcraft.com) Data by Fax 800/651-6974 Web <http://www.coilcraft.com>

# Micro Spring™ Air Core Inductors



The world's smallest surface mount air core inductors, these components provide exceptionally high Q over a wide range of frequencies.

They feature tight inductance tolerance and thermal stability, which can often eliminate the need for circuit tuning.

Coilcraft's Micro Spring™ inductors are tape and reel packaged and have an acrylic jacket with a flat top, making them suitable for automatic placement and reflow or vapor phase processing. The leads are tinned to ensure reliable soldering.

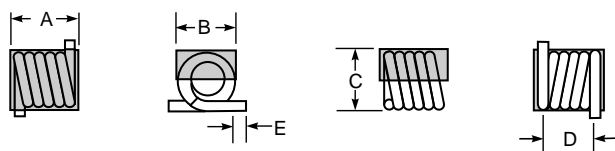
**Designer's Kit C108** contains samples of all 5% inductance tolerance parts. Kits with 2% tolerance are also available. To order, contact Coilcraft or visit <http://order.coilcraft.com>.

## Specifications

Part Number <sup>1</sup>	Turns	Inductance <sup>2</sup> (nH)	Percent Tolerance <sup>3</sup>	Q <sup>4</sup> Min	Test Freq. (MHz)	SRF <sup>5</sup> Min (GHz)	DCR <sup>6</sup> Max (mOhm)	I <sub>DC</sub> <sup>7</sup> Max (A)
0906-2_	2	1.65	<b>10</b>	100	800	10.0	4.0	1.6
0906-3_	3	2.55	<b>10,5</b>	100	800	8.2	5.0	1.6
0906-4_	4	3.85	<b>10,5,2</b>	100	800	7.5	6.0	1.6
0906-5_	5	5.40	<b>5,2</b>	100	800	7.0	8.0	1.6
1606-6_	6	5.60	<b>5,2</b>	100	800	6.5	9.0	1.6
1606-7_	7	7.15	<b>5,2</b>	100	800	6.0	10	1.6
1606-8_	8	8.80	<b>5,2</b>	100	800	6.0	12	1.6
1606-9_	9	9.85	<b>5,2</b>	100	800	5.2	13	1.6
1606-10_	10	12.55	<b>5,2</b>	100	800	4.6	14	1.6

For environmental data, see "Spring Inductors—Product Specifications" (Document 182).

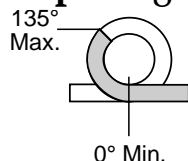
- When ordering, please add letter to specify inductance tolerance: **G**=2%, **J**=5%, **K**=10%.
- Inductance measured using Agilent/HP4286 with Coilcraft SMD-A fixture and correlation.
- Tolerances in bold are stocked for immediate shipment.
- Q measured using Agilent/HP4291A with Agilent/HP16193A test fixture.
- SRF measured using Agilent/HP8720D with Coilcraft SMD-D test fixture.
- DCR tested on the Cambridge Technology Model 510 Micro-ohmmeter.
- For 15° C temperature rise.
- Operating temperature range -40° C to +125° C.
- Electrical specifications at 25° C.



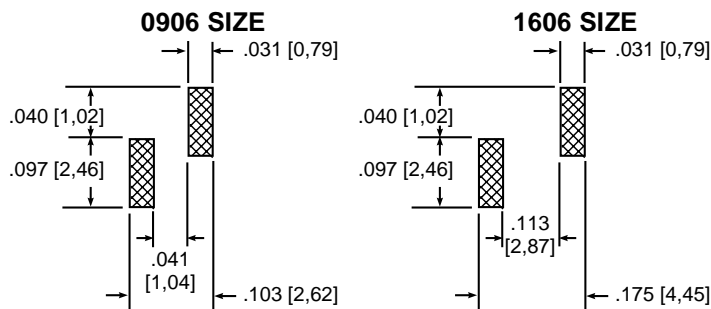
Size	A	B	C	D	E
0906	.087 ± .010 2.21 ± 0.25	.056 ± .005 1.42 ± 0.13	.054 ± .006 1.37 ± 0.15	.072 ± .010 1.83 ± 0.25	.035 ± .010 0.89 ± 0.25
1606	.159 ± .012 4.04 ± 0.30	.056 ± .005 1.42 ± 0.13	.054 ± .006 1.37 ± 0.15	.144 ± .012 3.66 ± 0.30	.035 ± .010 0.89 ± 0.25

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

### Strip Length



## Typical Land Patterns



Parts/reel: 7" 500\*; 13" 7,500

Parts/reel: 7" 500\*; 13" 7,500  
Tape width: 12 mm

\*Reels shipped from stock. Larger orders are 2000 per 7" reel.

For packaging data, see "Tape and Reel Specifications" (Document 173).

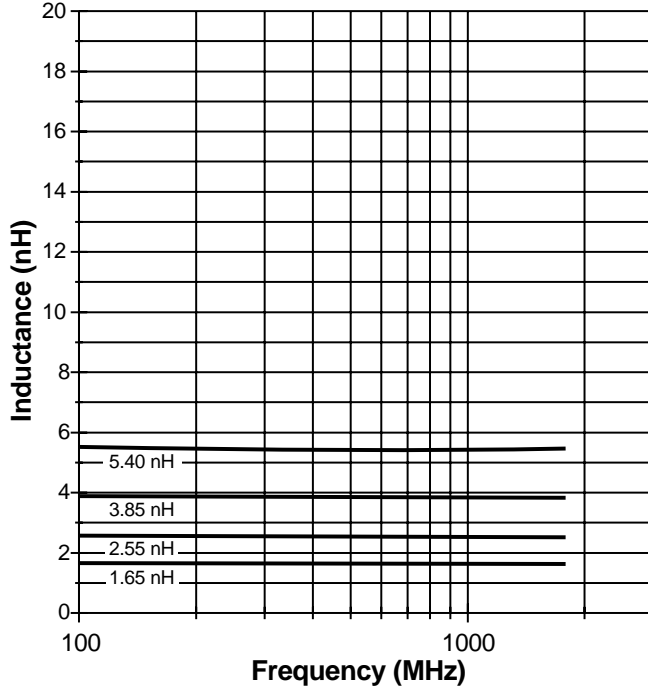
# Coilcraft

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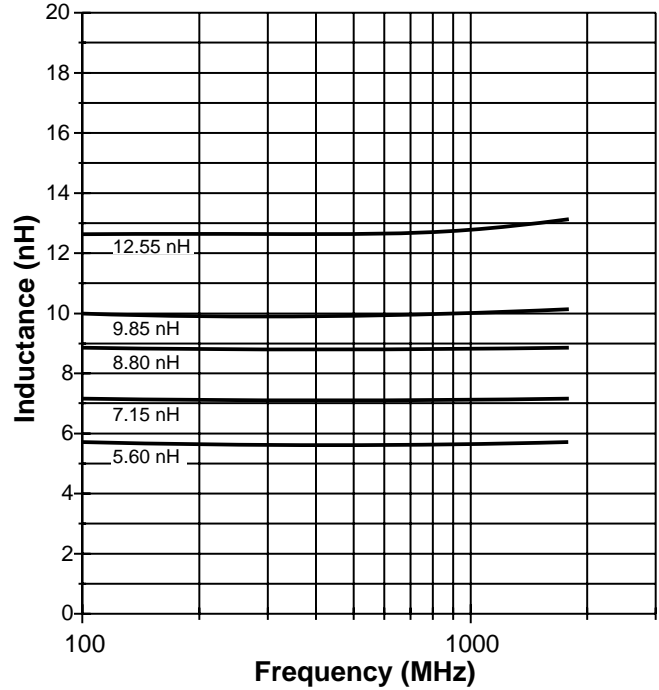
# Micro Spring™ Air Core Inductors

**S-Parameter files**  
ON OUR WEB SITE OR CD  
**PSpice models**  
SEE CATALOG, WEB SITE OR CD

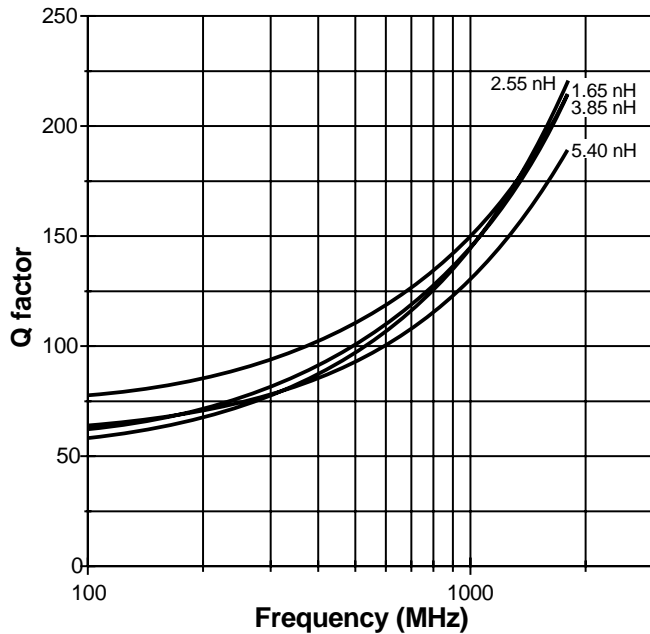
### Typical L vs Frequency – 0906 Series



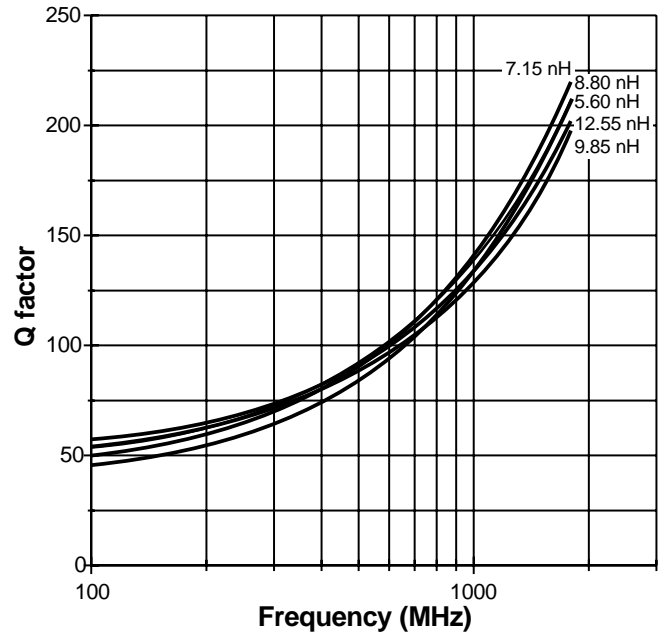
### Typical L vs Frequency – 1606 Series



### Typical Q vs Frequency – 0906 Series



### Typical Q vs Frequency – 1606 Series



Specifications subject to change without notice. Document 163-2 Revised 9/6/01

# Mini Spring™ Air Core Inductors



These surface mount air core “spring” inductors provide extremely high Q over a wide frequency range.

They're jacketed with a high temperature material which ensures mechanical stability and very close tolerance. It also forms a flat top, making them suitable for automatic placement and reflow or vapor phase processing. Tinned leads ensure reliable soldering.

Coilcraft Mini Spring™ inductors are available in standard EIA tape and reel packaging: 12 mm for size A, and 16 mm for size B parts.

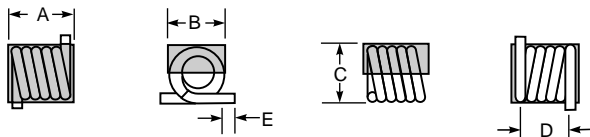
**Designer's Kit C102** contains samples of all 5% inductance tolerance parts. Kits with 2% tolerance are also available. To order, contact Coilcraft or visit <http://order.coilcraft.com>.

## Specifications

Part Number <sup>1</sup>	Turns	Inductance <sup>2</sup> (nH)	Percent Tolerance <sup>3</sup>	Q <sup>4</sup> Min	Test Freq. (MHz)	SRF <sup>5</sup> Min (GHz)	DCR <sup>6</sup> Max (mOhm)	I <sub>DC</sub> <sup>7</sup> Max (A)
A01T_	1	2.5	<b>10</b>	145	150	12.5	1.1	4
A02T_	2	5.0	<b>10,5</b>	140	150	6.5	1.8	4
A03T_	3	8.0	<b>5,2</b>	140	150	5.0	2.6	4
A04T_	4	12.5	<b>5,2</b>	137	150	3.3	3.4	4
A05T_	5	18.5	<b>5,2</b>	132	150	2.5	3.9	4
B06T_	6	17.5	<b>5,2</b>	100	150	2.2	4.5	4
B07T_	7	22.0	<b>5,2</b>	102	150	2.1	5.2	4
B08T_	8	28.0	<b>5,2</b>	105	150	1.8	6.0	4
B09T_	9	35.5	<b>5,2</b>	112	150	1.5	6.8	4
B10T_	10	43.0	<b>5,2</b>	106	150	1.2	7.9	4

For environmental data, see “Spring Inductors—Product Specifications” (Document 182).

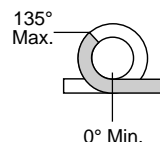
- When ordering, please add number to specify inductance tolerance: **G**=2%, **J**=5%, **K**=10%.
- Inductance measured using Agilent/HP4286 with Coilcraft SMD-A fixture and correlation.
- Tolerances in bold are stocked for immediate shipment.
- Q measured using Agilent/HP4291A with Agilent/HP16193A test fixture.
- SRF measured using Agilent/HP8720D with Coilcraft SMD-D test fixture.
- DCR tested on the Cambridge Technology Model 510 Micro-ohmmeter.
- For 15° C temperature rise.
- Operating temperature -40° C to +125° C.
- Electrical specifications at 25° C.



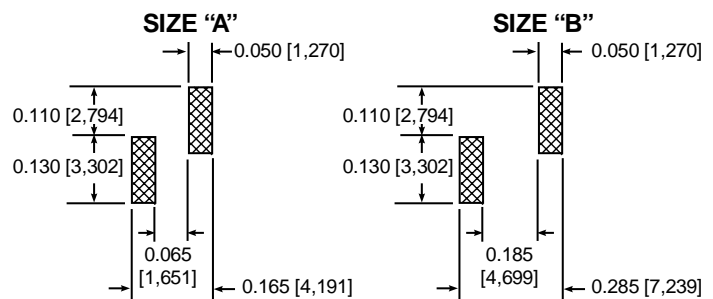
Size	A	B	C	D	E
A	.145 3.68	.120 3.05	.125 3.18	.115 ± .010 2.92 ± 0.25	.023 ± .015 0.58 ± 0.38
B	.270 6.86	.120 3.05	.125 3.18	.230 ± .015 5.84 ± 0.25	.023 ± .015 0.58 ± 0.38

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

## Strip Length



## Typical Land Patterns



Parts/reel: 7" 700; 13" 2,500  
Tape width: 12 mm

Parts/reel: 7" 500; 13" 2,200  
Tape width: 16 mm

For packaging data, see “Tape and Reel Specifications” (Document 173).

**Coilcraft**

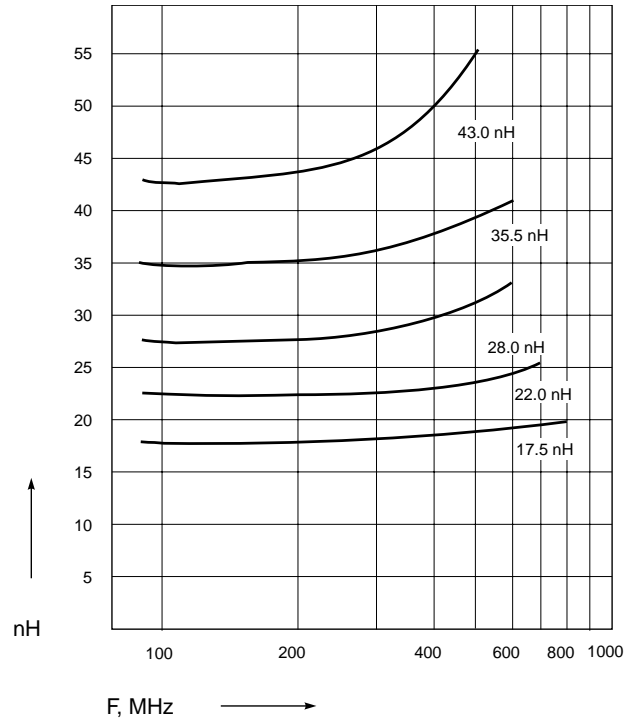
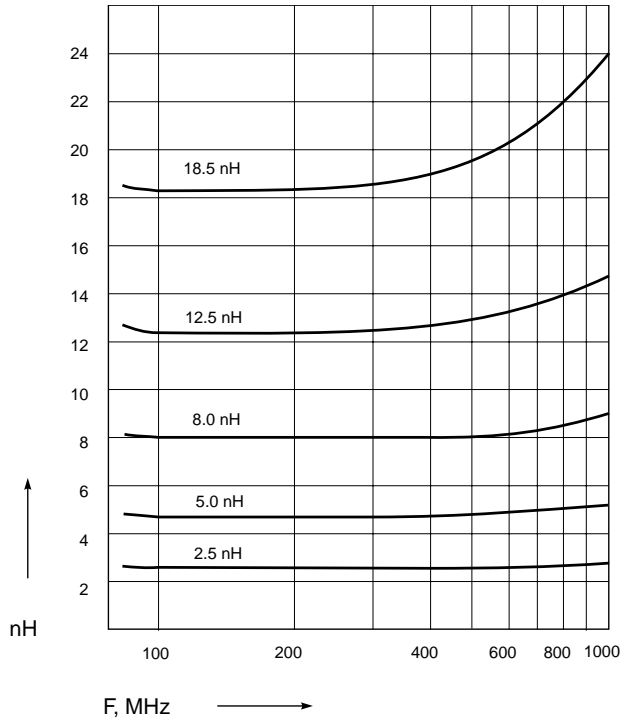
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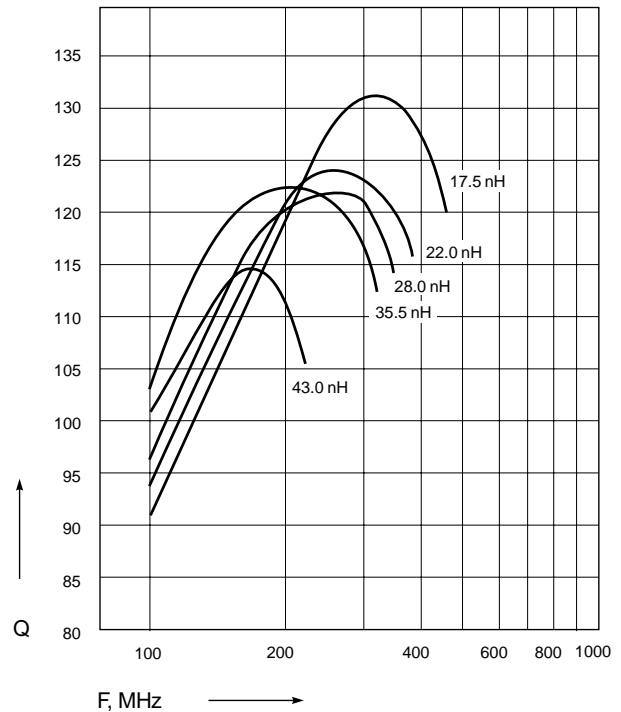
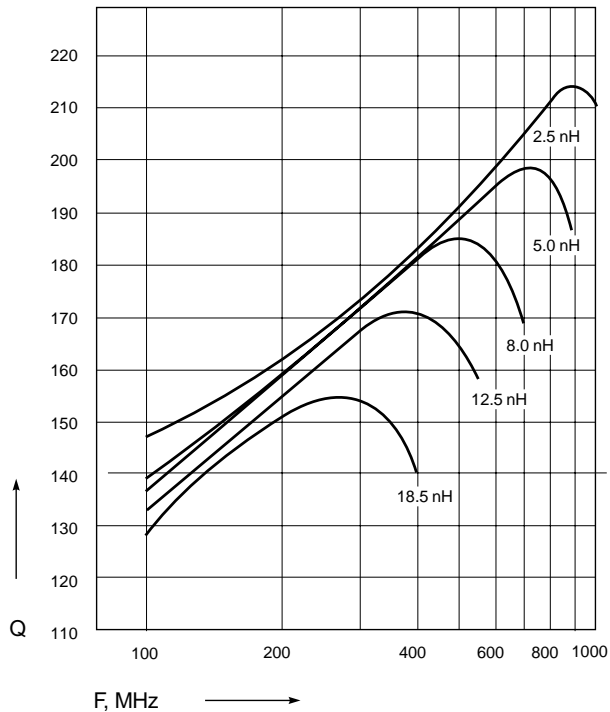
# Mini Spring™ Air Core Inductors

**S-Parameter files**  
ON OUR WEB SITE OR CD  
**PSpice models**  
SEE CATALOG, WEB SITE OR CD

## Typical L vs Frequency



## Typical Q vs Frequency



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# Midi Spring™ Air Core Inductors



This family of surface mount Midi Spring™ inductors is designed for higher current applications (up to 3.5 Amps) than our smaller series. It also provides higher Q factors at lower frequencies.

Like all Coilcraft “spring” inductors, these parts provide the advantages of an air core inductor in a package optimized for auto placement. The top of the coil is capped with acrylic, forming a flat surface and assuring mechanical stability. The leads are tinned for reliable soldering.

**Designer’s Kit C118** contains samples of all 5% inductance tolerance parts. Kits with 2% tolerance are also available. To order, contact Coilcraft or visit <http://order.coilcraft.com>.

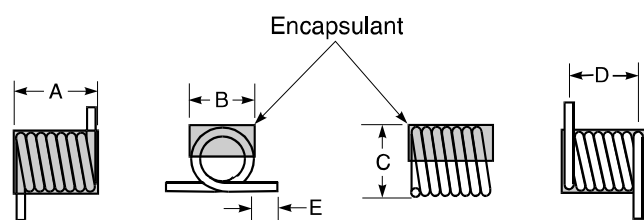
## Specifications

Part Number <sup>1</sup>	Inductance <sup>2</sup> (nH)	Percent Tolerance <sup>3</sup>	Q <sup>2</sup> Typ	Q <sup>2</sup> Min	Test Freq. (MHz)	SRF <sup>4</sup> Min (GHz)	DCR <sup>5</sup> Max (mOhm)	I <sub>DC</sub> <sup>6</sup> Max (A)
1812SMS-22N	22	<b>5,2</b>	135	100	150	3.2	4.2	3.0
1812SMS-27N	27	<b>5,2</b>	135	100	150	2.7	4.0	3.5
1812SMS-33N	33	<b>5,2</b>	130	100	150	2.5	4.8	3.0
1812SMS-39N	39	<b>5,2</b>	135	100	150	2.1	4.4	3.0
1812SMS-47N	47	<b>5,2</b>	135	100	150	2.1	5.6	3.0
1812SMS-56N	56	<b>5,2</b>	125	100	150	1.5	6.2	3.0
1812SMS-68N	68	<b>5,2</b>	120	100	150	1.5	8.2	2.5
1812SMS-82N	82	<b>5,2</b>	120	100	150	1.3	9.4	2.5
1812SMS-R10	100	<b>5,2</b>	115	100	150	1.2	12.3	1.7
1812SMS-R12	120	<b>5,2</b>	125	100	150	1.1	17.3	1.5

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

For environmental data, see “Spring Inductors—Product Specifications” (Document 182).

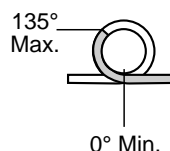
- When ordering, please add letter to specify inductance tolerance: J=5%, G=2%.
- Inductance and Q tested on the Agilent/HP4291A with the 16193 fixture and correlation.
- Tolerances in bold are stocked for immediate shipment.
- SRF tested on the Agilent/HP8753D and the SMD-D test fixture.
- DCR tested on the Cambridge Technology Model 510 Micro Ohmmeter.
- For 15° C rise.
- Operating temperature range –40° C to +125° C.
- Electrical specifications at 25° C.



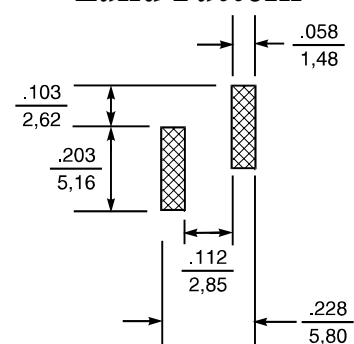
A max	B max	C max	D	E
.195	.150	.165	.170 ± .015	.060 ± .015
4,95	3,81	4,20	4,32 ± 0,39	1,53 ± 0,39

Parts/reel: 7" 500 13" 2,000 Tape width: 12 mm  
For packaging data, see “Tape and Reel Specifications” (Document 173).

**Strip Length**



**Land Pattern**



**Coilcraft**

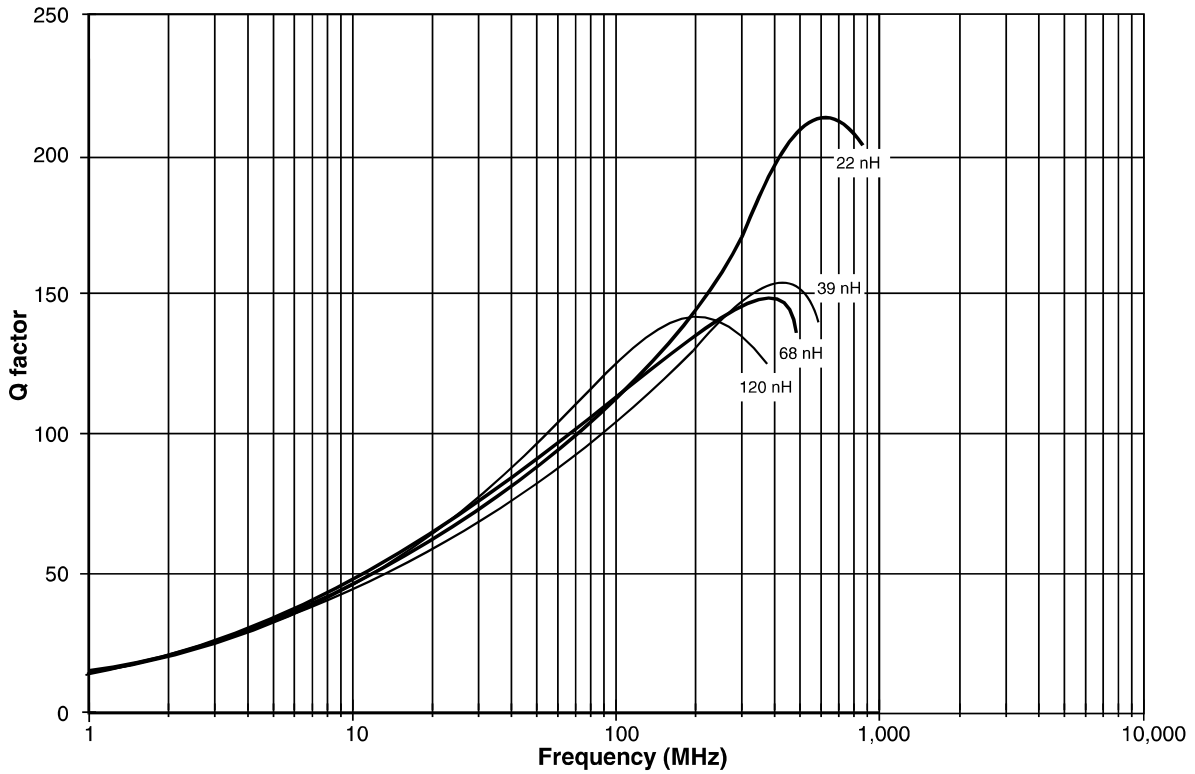
Specifications subject to change without notice. Document 184-1 Revised 4/9/01

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E-mail [info@coilcraft.com](mailto:info@coilcraft.com) Web <http://www.coilcraft.com>

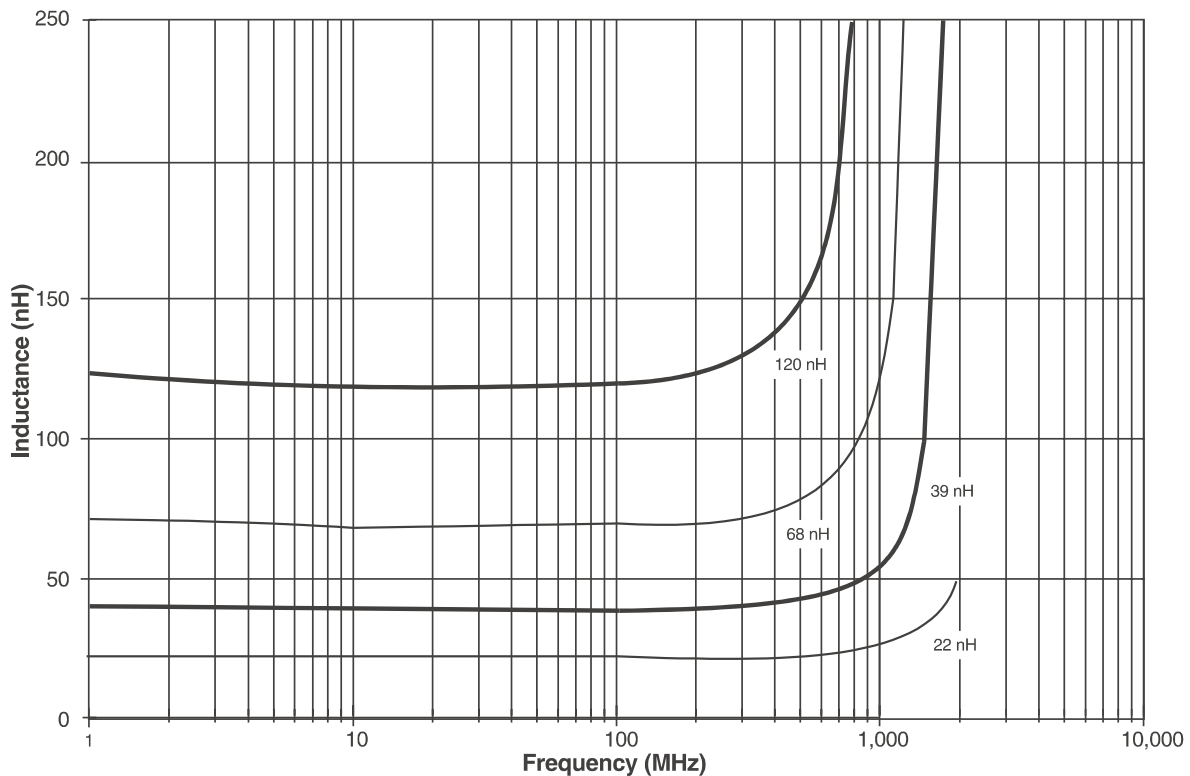
# Midi Spring™ Air Core Inductors

## Typical Q vs Frequency

**S-Parameter files**  
ON OUR WEB SITE OR CD  
**PSpice models**  
SEE CATALOG, WEB SITE OR CD

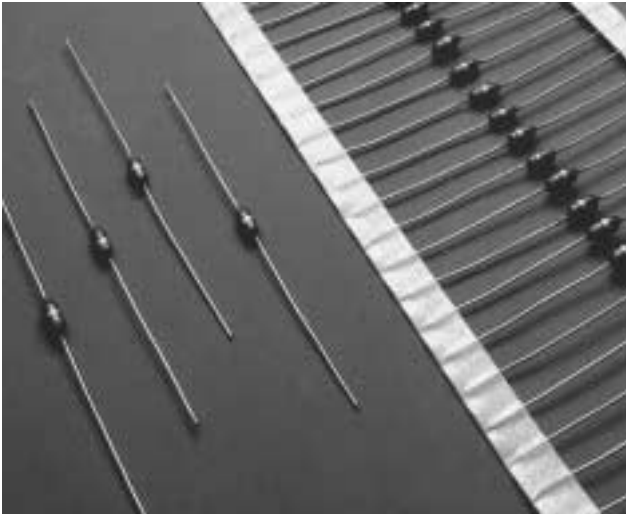


## Typical L vs Frequency



Specifications subject to change without notice. Document 184-2 Revised 4/9/01

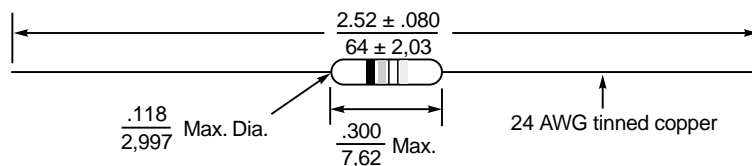
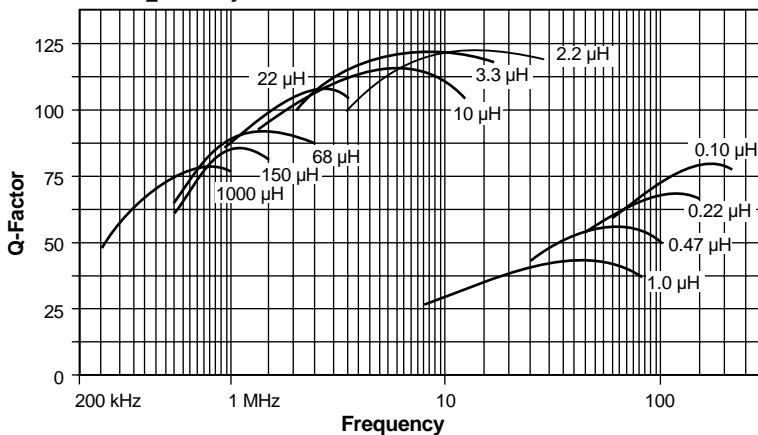
# Axial Lead Chokes – 90 Series



Coilcraft's axial lead chokes are totally encapsulated in a durable epoxy coating. Their low cost compared to molded type chokes makes them particularly attractive to high volume users. Coilcraft chokes are available in the standard values listed here as well as in custom values to meet your specific requirements.

Coilcraft **Designer's Kit No. F102** contains samples of 25 standard parts (all odd-numbered values). To order, please contact Coilcraft.

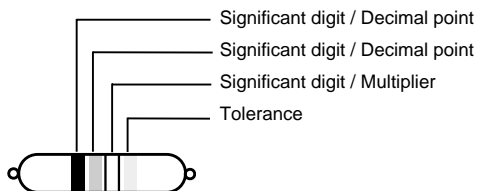
## Q vs Frequency



## Features

- No molding stress to break wire
- 10% inductance tolerance standard, 5% available
- Temperature coefficient compatible with N030-N080 capacitors through part number 90-30
- Standard EIA color coding
- Significant savings for high volume users
- Available bulk packed, in conventional tape and reel, or "ammo packs." Custom lead forming also available
- Offered in 49 standard values or in custom values

## Color Coding – Inductance in µH



Black = 0	Blue = 6
Brown = 1	Violet = 7
Red = 2	Gray = 8
Orange = 3	White = 9
Yellow = 4	Gold = Decimal point
Green = 5	Silver = 10% tolerance

**Note:** The color gold represents a decimal point and will only appear in the 1st or 2nd stripe locations. When a gold stripe is present, there will be no multiplier. The inductance value will be as indicated in microHenries.

# Coilcraft

Specifications subject to change without notice. Document 115-1 Revised 7/24/01

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# Axial Lead Chokes – 90 Series

Part Number	L <sup>1</sup> ( $\mu\text{H} \pm 10\%$ )	Q <sup>2</sup> Min.	Test Freq. (MHz)	DCR Max. (Ohms)	SRF Min. (MHz)	Max Current <sup>3</sup> (mA)	Core Material
90-01	0.10	38	25	0.08	680	1380	Phenolic
90-02	0.12	38	25	0.09	640	1300	Phenolic
90-03	0.15	38	25	0.11	600	1230	Phenolic
90-04	0.18	35	25	0.12	550	1120	Phenolic
90-05	0.22	33	25	0.14	510	1040	Phenolic
90-06	0.27	33	25	0.16	460	975	Phenolic
90-07	0.33	30	25	0.22	410	830	Phenolic
90-08	0.39	30	25	0.3	365	710	Phenolic
90-09	0.47	30	25	0.35	330	660	Phenolic
90-10	0.56	30	25	0.5	310	550	Phenolic
90-11	0.68	28	25	0.6	280	500	Phenolic
90-12	0.82	28	25	0.85	260	420	Phenolic
90-13	1.0	25	25	1	240	390	Phenolic
90-14	1.2	60	7.9	0.15	150	620	Ferrite
90-15	1.5	60	7.9	0.16	140	560	Ferrite
90-16	1.8	60	7.9	0.2	125	480	Ferrite
90-17	2.2	60	7.9	0.29	115	415	Ferrite
90-18	2.7	50	7.9	0.4	100	355	Ferrite
90-19	3.3	50	7.9	0.42	90	285	Ferrite
90-20	3.9	50	7.9	0.6	80	263	Ferrite
90-21	4.7	40	7.9	0.66	60	239	Ferrite
90-22	5.6	40	7.9	0.7	45	195	Ferrite
90-23	6.8	40	7.9	0.9	40	185	Ferrite
90-24	8.2	40	7.9	1	28	160	Ferrite
90-25	10	35	7.9	1.1	24	144	Ferrite
90-26	12	60	2.5	1.62	20	160	Ferrite
90-27	15	60	2.5	1.75	17	157	Ferrite
90-28	18	60	2.5	1.85	16	149	Ferrite
90-29	22	50	2.5	2	14	144	Ferrite
90-30	27	50	2.5	2.1	12	140	Ferrite
90-31	33	50	2.5	2.2	10	130	Ferrite
90-32	39	50	2.5	2.3	9.5	125	Ferrite
90-33	47	50	2.5	2.4	9	110	Ferrite
90-34	56	50	2.5	3	7.8	100	Ferrite
90-35	68	50	2.5	3.4	7	92	Ferrite
90-36	82	50	2.5	3.8	6.7	88	Ferrite
90-37	100	50	2.5	4.1	6.1	84	Ferrite
90-38	120	60	0.79	6.5	4.8	66	Ferrite
90-39	150	60	0.79	8.3	4.1	61	Ferrite
90-40	180	60	0.79	8.9	4	57	Ferrite
90-41	220	60	0.79	10.1	3.6	52	Ferrite
90-42	270	60	0.79	11	3.3	47	Ferrite
90-43	330	60	0.79	12.4	3.1	45	Ferrite
90-44	390	60	0.79	13.6	2.9	40	Ferrite
90-45	470	60	0.79	18.4	2.4	36	Ferrite
90-46	560	60	0.79	20.3	2.2	35	Ferrite
90-47	680	60	0.79	22.3	2	30	Ferrite
90-48	820	60	0.79	25	1.9	29	Ferrite
90-49	1000	60	0.79	27.4	1.8	28	Ferrite

- NOTES:**
- Inductance measured with a Coilcraft AXL-A test fixture and Agilent/HP4192/4286 Impedance Analyzers.
  - Q measured on Agilent/HP4192/4286 with AXL-A, direct-connected to Agilent/HP4342 Q-Meter.
  - Temperature rise at rated current and 90° C ambient  
.10 – 1.0  $\mu\text{H}$ : 35° C  
1.2 – 1000  $\mu\text{H}$ : 15° C
  - Operating temperature range  
.10 – 1.0  $\mu\text{H}$ : –40° C to +125° C  
1.2 – 1000  $\mu\text{H}$ : –40° C to +105° C
  - Electrical specifications at 25° C.
  - Color coding per MIL-C-15305C
  - Epoxy coating: flame resistant 94 VO
  - Designed to meet requirements of Military Specifications MS75083, MS75084 and MS75085.

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

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# Power Inductors – DC1012 Series



These power inductors are especially effective as DC-DC converter boost or buck inductors and as output ripple filter chokes in all types of downsized switching power supplies.

They are ideal for applications requiring small size, cost effective power inductors. The vertical style helps reduce power supply size by saving crucial printed circuit board area. The large inductance available per size makes these parts ideal for all sorts of energy storage, smoothing, and EMI reduction applications.

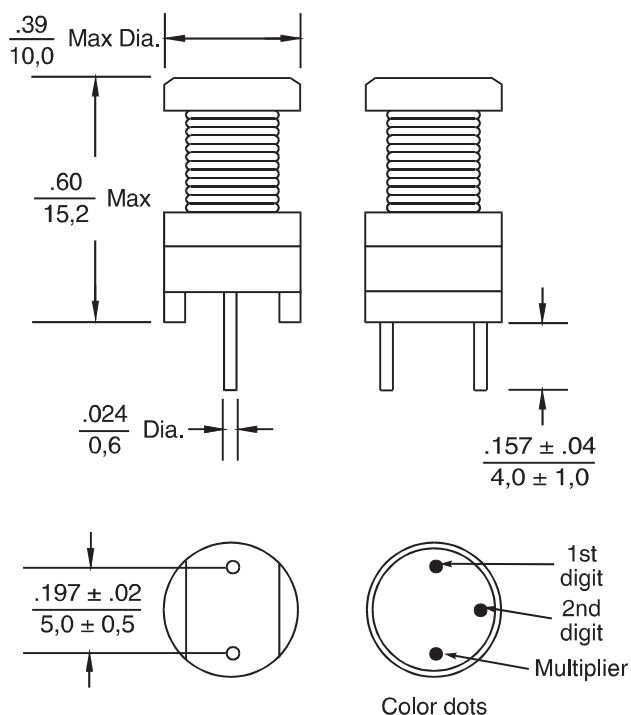
The Coilcraft DC1012 Series includes a wide range of EIA standard inductance values. Custom versions are also available.

Coilcraft **Designer's Kit P210** contains three samples of all the standard parts shown. To order, contact Coilcraft.

## Specifications

Part Number	Inductance <sup>1</sup> 10% $\mu$ H	DCR Max ( $\Omega$ )	Current Rating <sup>2</sup> (Amps)
DC1012-103	10	.026	3.5
DC1012-123	12	.030	3.2
DC1012-153	15	.035	3.0
DC1012-183	18	.038	2.8
DC1012-223	22	.046	2.5
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DC1012-273	27	.070	2.2
DC1012-333	33	.080	2.0
DC1012-393	39	.088	1.8
DC1012-473	47	.100	1.6
DC1012-563	56	.15	1.4
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DC1012-683	68	.17	1.2
DC1012-823	82	.20	1.2
DC1012-104	100	.22	1.2
DC1012-124	120	.29	1.0
DC1012-154	150	.34	.9
<hr/>			
DC1012-184	180	.38	.8
DC1012-224	220	.44	.7
DC1012-274	270	.62	.7
DC1012-334	330	.70	.6

1. Tested at 100 kHz, .1 Vrms.
2. Current rating is based on I<sup>2</sup>R loss = 3/8 Watt Max. Inductance drop is 10% typ. at the rated current.
3. Operating temperature range -40° C to +85° C.
4. Electrical specifications at 25° C.



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# Self Leaded Power Inductors – HCT Series



This low cost toroidal inductor is designed for high current, low voltage applications, particularly the latest generation of low voltage microprocessors.

The toroid core offers compact size with minimal external magnetic fields.

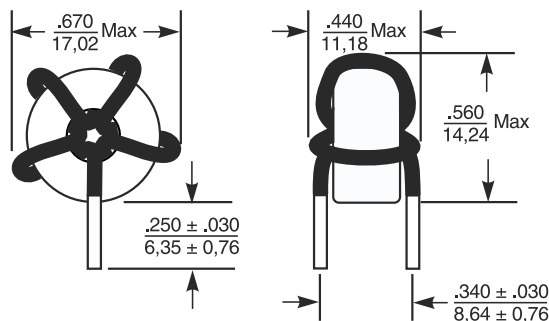
This part can be provided in either vertical or horizontal mounting style. Custom versions can be readily obtained in addition to the standard parts shown

For free evaluation samples, please contact Coilcraft.

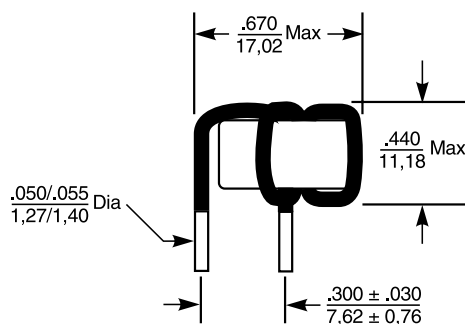
Part number	Mounting style	Inductance ( $\mu\text{H}$ ) $\pm 10\%$	DCR max (Ohms)	I sat <sup>2</sup> (A)	Current max <sup>3</sup> (A)
HCT-1-152-15	Vertical	1.5	.0021	15	15
HCT-2-152-15	Horizontal	1.5	.0021	15	15

1. Inductance tested at 0.1 Vrms, 100 kHz, with DC bias applied to the rated current.
2. Inductance drop = 10% typ. at Isat
3.  $\Delta T = 40^\circ\text{C}$  rise typ. at the rated current.
4. Operating temperature  $-40^\circ\text{C}$  to  $+85^\circ\text{C}$ .
5. Specifications at  $25^\circ\text{C}$ .

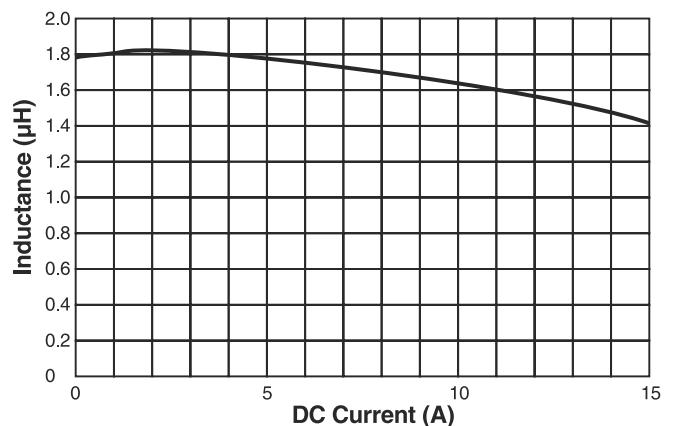
## Dimensions - Vertical Style



## Dimensions - Horizontal Style



## L vs Current



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