

**NEW!**

# Power Chip Inductors - 1812PS Series



Coilcraft's new 1812PS Series is designed to be an economical alternative to larger and more costly shielded power inductors.

Only 3,81 mm high, they are ideal for applications requiring magnetic shielding, the smallest possible size and lowest cost. Typical uses include notebook computers, PC cards, wireless communication and handheld devices.

The specially designed ferrite cover provides magnetic shielding and the best possible surface for pick and place handling.

Coilcraft **Designer's Kit C143** contains six samples each of the standard parts shown. To order, contact Coilcraft or visit <http://order.coilcraft.com>.

Part number <sup>1</sup>	L ± 20% <sup>2</sup> (μH)	Q min <sup>3</sup> @ 1 MHz	DCR <sup>4</sup> max (Ohms)	SRF <sup>5</sup> typ (MHz)	Isat <sup>6</sup> (A)	Irms <sup>7</sup> (A)
1812PS-102M_	1.0	35	0.05	685	2.50	2.70
1812PS-152M_	1.5	38	0.06	460	2.00	2.60
1812PS-222M_	2.2	38	0.07	270	1.70	2.40
1812PS-272M_	2.7	40	0.08	265	1.40	2.30
1812PS-332M_	3.3	40	0.09	225	1.40	2.30
1812PS-392M_	3.9	40	0.11	170	1.20	2.20
1812PS-472M_	4.7	40	0.11	165	1.15	2.10
1812PS-562M_	5.6	40	0.12	155	1.10	2.10
1812PS-682M_	6.8	40	0.13	140	1.00	1.90
1812PS-103M_	10	40	0.17	120	0.90	1.70
1812PS-153M_	15	40	0.26	100	0.70	1.45
1812PS-223M_	22	40	0.33	45	0.54	1.20
1812PS-333M_	33	40	0.40	30	0.46	1.10
1812PS-393M_	39	48	0.56	30	0.40	1.00
1812PS-473M_	47	50	0.87	28	0.35	0.80
1812PS-683M_	68	50	1.08	17	0.32	0.67
1812PS-823M_	82	55	1.25	17	0.28	0.65
1812PS-104M_	100	60	1.32	14	0.27	0.65
1812PS-124M_	120	60	1.45	12	0.23	0.60
1812PS-154M_	150	60	2.20	11	0.20	0.51
1812PS-224M_	220	60	2.65	7	0.17	0.47
1812PS-334M_	330	60	4.85	5.5	0.15	0.31
1812PS-474M_	470	50	5.85	4.0	0.12	0.31
1812PS-564M_	560	40	6.10	2.6	0.11	0.28
1812PS-684M_	680	40	6.60	2.3	0.10	0.28
1812PS-824M_	820	30	7.35	1.8	0.09	0.25
1812PS-105M_	1000	28	10.00	1.8	0.08	0.22

1. Specify **packaging** code:

**1812PS-105M C**

**Packaging:** **C** = 7" machine-ready reel. EIA-481 embossed plastic tape (600 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 (2200 parts per full reel)..

2. Inductance measured at 100 kHz, 0.1 Vrms, using Coilcraft SMD-A fixture in Agilent/HP 4263B impedance analyzer.

3. Q measured on Agilent/HP 4291 with Agilent/HP 16193 test fixture.

4. DCR measured on micro-ohmmeter and Coilcraft CCF840 test fixture.

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

6. DC current at which the inductance drops 10% (typ) from its value without current.

7. Average current for a 40°C rise above 25°C ambient.

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

9. Electrical specifications at 25°C.

See Qualification Standards section for environmental and test data.

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

**Coilcraft**<sup>®</sup>

Specifications subject to change without notice. Document 252-1 Revised 9/25/02

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>

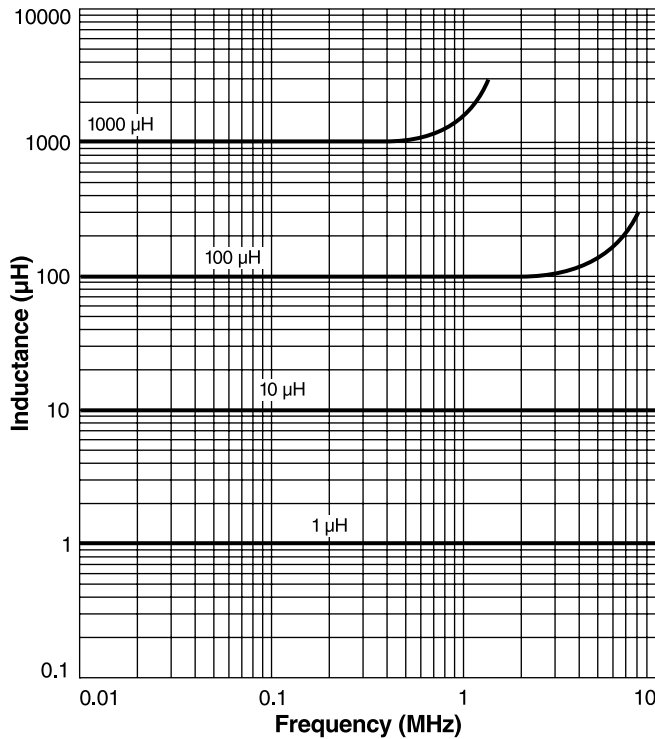
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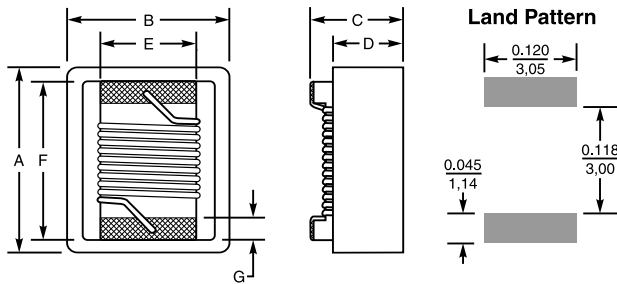
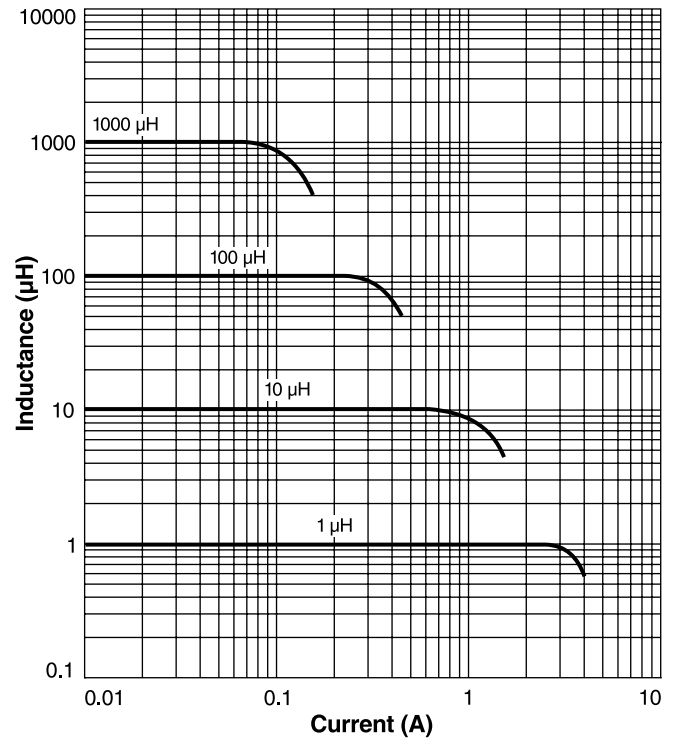
**S-Parameter files**  
ON OUR WEB SITE OR CD

**SPICE models**  
ON OUR WEB SITE OR CD

## Typical L vs Frequency



## Typical L vs Current



A max	B max	C max	D ref	E ref	F ref	G
0.231	0.196	0.150	0.107	0.100	0.178	0.025
5.87	4.98	3.81	2.72	2.54	4.52	0.64

Parts/reel: 7" 600; 13" 2200 Tape width: 12 mm  
For packaging data see Tape and Reel Specifications section.

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