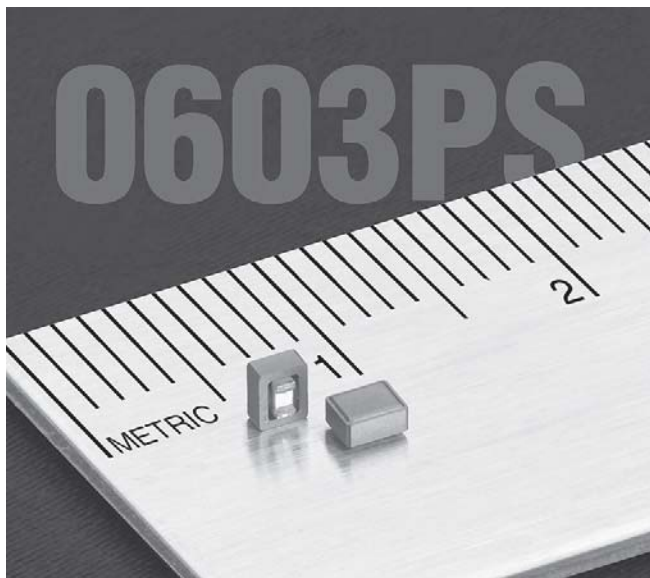




# Power Chip Inductors - 0603PS Series



The 0603PS is Coilcraft's smallest shielded inductor. It's ideal for power conversion applications where high inductance, low DC resistance and electromagnetic shielding are required.

Due to its simple wirewound construction, the 0603PS is an especially attractive low cost alternative to larger, more expensive shielded power inductors.

The ferrite body and shield permit very high inductance ratings for a part this small: up to 47  $\mu\text{H}$ . They also minimize DC resistance and allow these ultra-small parts to carry up to half an Amp!

Coilcraft **Designer's Kit C146** contains six samples each of the standard values shown. To order, contact Coilcraft or visit <http://order.coilcraft.com>.

Part number <sup>1</sup>	$L \pm 10\%^2$ ( $\mu\text{H}$ )	$Q_{\text{min}}^3$ at 1 MHz	$\text{DCR}^4$ max (Ohms)	$\text{SRF}^5$ min (MHz)	$\text{Isat}^6$ (A)	$\text{Irms}^7$ (A)
0603PS-781K_	0.78	15	0.24	475	0.55	1.30
0603PS-102K_	1.0	15	0.26	390	0.40	1.00
0603PS-182K_	1.8	15	0.54	155	0.39	0.70
0603PS-222K_	2.2	15	0.75	245	0.33	0.60
0603PS-272K_	2.7	15	0.75	127	0.33	0.55
0603PS-332K_	3.3	15	0.88	72	0.32	0.50
0603PS-392K_	3.9	15	1.00	72	0.27	0.48
0603PS-472K_	4.7	15	1.08	55	0.26	0.47
0603PS-562K_	5.6	15	1.23	43	0.25	0.41
0603PS-682K_	6.8	15	1.37	36	0.23	0.40
0603PS-822K_	8.2	20	1.43	30	0.22	0.39
0603PS-103K_	10	20	1.60	30	0.21	0.38
0603PS-153K_	15	20	1.92	22	0.16	0.35
0603PS-223K_	22	20	2.96	16	0.13	0.27
0603PS-333K_	33	20	5.63	12	0.10	0.20
0603PS-473K_	47	20	5.69	12	0.10	0.18

1. When ordering, please specify **packaging** code:

**0603PS-473K C**

**Packaging: C** = 7" machine-ready reel. EIA-481 embossed plastic tape (2000 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 (7500 parts per full reel).

- Inductance measured at 100 kHz, 0.1 Vrms, using a Coilcraft SMD-A fixture in an Agilent/HP 4263B impedance analyzer.
  - Q measured on an Agilent/HP 4291 with an Agilent/HP 16193 test fixture.
  - DCR measured on a micro-ohmmeter and a Coilcraft CCF840 test fixture.
  - SRF measured using an Agilent/HP 8753D network analyzer and a Coilcraft SMD-D test fixture.
  - DC current at which the inductance drops 10% (typ) from its value without current.
  - Average current for 40°C temperature rise above 25°C ambient.
  - Operating temperature range -40°C to +85°C.
  - 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.  
Please check our website for latest information.

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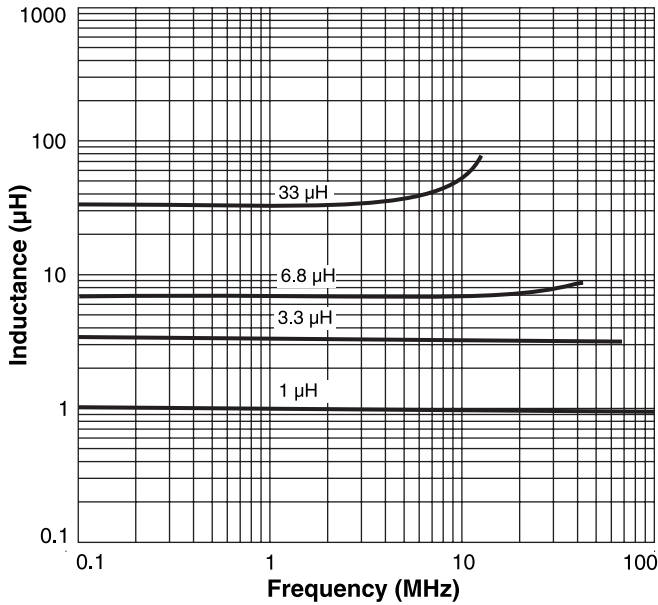
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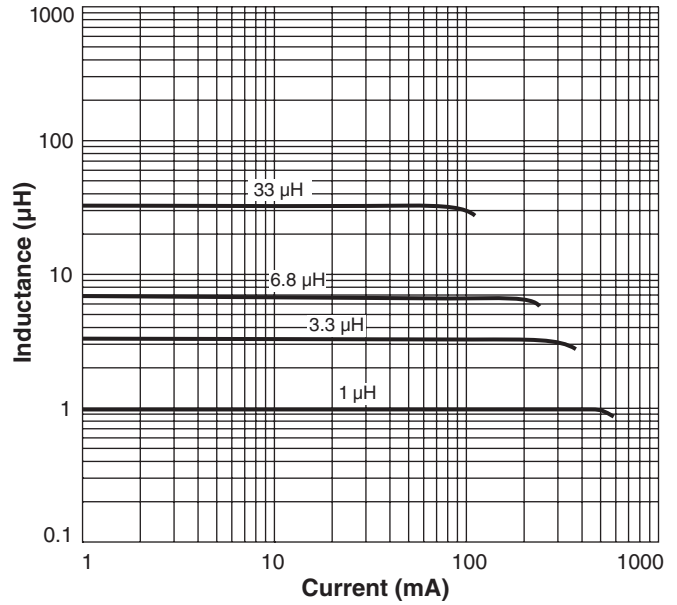


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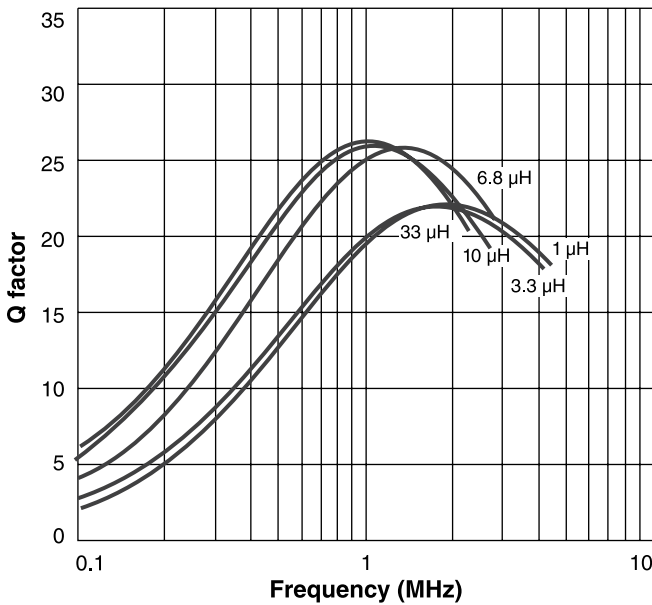
## Typical L vs Frequency



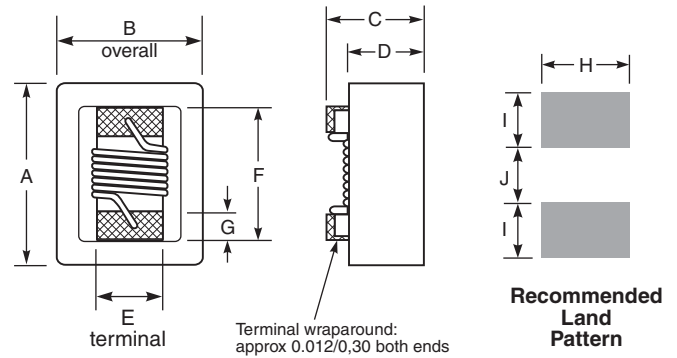
## Typical L vs Current



## Typical Q vs Frequency



## Dimensions



A max	B max	C max	D	E	F	G	H	I	J
0.102	0.082	0.071	0.049	0.030	0.060	0.013	0.040	0.025	0.025
2,59	2,08	1,80	1,24	0,76	1,52	0,33	1,02	0,64	0,64

**Weight:** 26.4 – 27.9 mg  
**Terminations:** Platinum/palladium/silver  
**Tape and reel:** 2000/7" reel; 7500/13" reel 8 mm tape width  
 For packaging data see Tape and Reel Specifications section.



Specifications subject to change without notice. Please check our website for latest information. Document 266-2 Revised 12/15/04

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