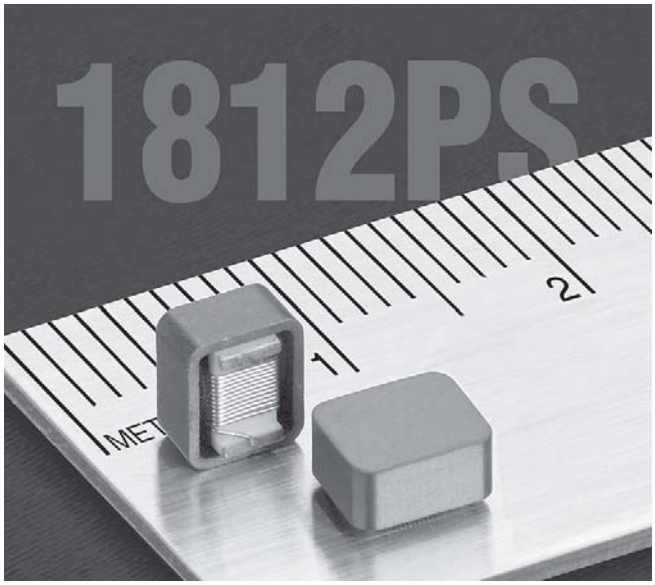
Power Chip Inductors – 1812PS Series



- Economical alternative to larger shielded power inductors.
- Ferrite cover provides magnetic shielding
- Available in 5% and 10% inductance tolerances

Designer's Kit C343 contains six of each 10% part

Core material Ceramic/Ferrite

Terminations RoHS compliant silver-palladium-platinum-glass frit. Other terminations available at additional cost.

Weight 286 – 323 mg

Ambient temperature –40°C to +105°C with Irms current, +85°C to +145°C with derated current

Storage temperature Component: –40°C to +145°C. Packaging: –55°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) +200 to +700 ppm/°C

Moisture Sensitivity Level (MSL) 1 (unlimited floor life at <30°C / 85% relative humidity)

Mean Time Between Failures (MTBF) 26,315,789 hours

Packaging 600 per 7″reel; 2200 per 13″ reel; Plastic tape: 12 mm wide, 0.25 mm thick, 4 mm pocket spacing, 3.9 mm pocket depth

PCB washing Only pure water or alcohol recommended

Part number[1]	L[2] (µH)	% tol[3]	Q min[4]	DCR max[5] (Ohms)	SRF typ[6] (MHz)	Isat[7] (A)	Irms[8] (A)
1812PS-102_L_	1.0	**10,5**	35	0.05	685	2.50	2.70
1812PS-122_L_	1.2	**10,5**	38	0.06	460	2.00	2.60
1812PS-152_L_	1.5	**10,5**	38	0.06	460	2.00	2.60
1812PS-222_L_	2.2	**10,5**	38	0.07	270	1.70	2.40
1812PS-272_L_	2.7	**10,5**	40	0.08	265	1.40	2.30
1812PS-332_L_	3.3	**10,5**	40	0.09	225	1.40	2.30
1812PS-392_L_	3.9	**10,5**	40	0.11	170	1.20	2.20
1812PS-472_L_	4.7	**10,5**	40	0.11	165	1.15	2.10
1812PS-562_L_	5.6	**10,5**	40	0.12	155	1.10	2.10
1812PS-682_L_	6.8	**10,5**	40	0.13	140	1.00	1.90
1812PS-103_L_	10	**10,5**	40	0.17	120	0.90	1.70
1812PS-153_L_	15	**10,5**	40	0.26	100	0.70	1.45
1812PS-223_L_	22	**10,5**	40	0.33	45	0.54	1.20
1812PS-333_L_	33	**10,5**	40	0.40	30	0.46	1.10
1812PS-393_L_	39	**10,5**	48	0.56	30	0.40	1.00
1812PS-473_L_	47	**10,5**	50	0.87	28	0.35	0.80
1812PS-683_L_	68	**10,5**	50	1.08	17	0.32	0.67
1812PS-823_L_	82	**10,5**	55	1.25	17	0.28	0.65
1812PS-104_L_	100	**10,5**	60	1.32	14	0.27	0.65
1812PS-124_L_	120	**10,5**	60	1.45	12	0.23	0.60
1812PS-154_L_	150	**10,5**	60	2.20	11	0.20	0.51
1812PS-224_L_	220	**10,5**	60	2.65	7	0.17	0.47
1812PS-334_L_	330	**10,5**	60	4.85	5.5	0.15	0.31
1812PS-474_L_	470	**10,5**	50	5.85	4.0	0.12	0.31
1812PS-564_L_	560	**10,5**	40	6.10	2.6	0.11	0.28
1812PS-684_L_	680	**10,5**	40	6.60	2.3	0.10	0.28
1812PS-824_L_	820	**10,5**	30	7.35	1.8	0.09	0.25
1812PS-105_L_	1000	**10,5**	28	10.00	1.8	0.08	0.22

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

   1812PS-105 J L C

   Tolerance: **J** = 5% **K** = 10% (Table shows stock tolerances in bold.)

   Termination: **L** = RoHS compliant silver-palladium-platinum-glass frit. 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 (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. Factory order only, not stocked (2200 parts per full reel).
2. Inductance measured at 100 kHz, 0.1 Vrms, using Coilcraft SMD-A fixture in Agilent/HP 4263B LCR meter.
3. Tolerances in bold are stocked for immediate shipment.
4. Q measured on Agilent/HP 4291 with Agilent/HP 16193 test fixture.
5. DCR measured on micro-ohmmeter and Coilcraft CCF840 test fixture.
6. SRF measured using Agilent/HP 8753D network analyzer and Coilcraft SMD-D test fixture.
7. DC current at which the inductance drops 10% (typ) from its value without current.
8. Current that causes a 40°C temperature rise from 25°C ambient.
9. Electrical specifications at 25°C.

See Qualification Standards section for environmental and test data.
Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

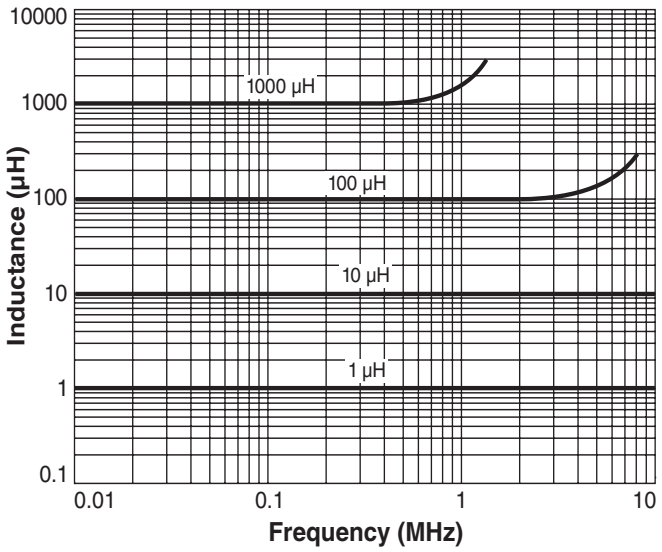
1102 Silver Lake Road Cary, Illinois 60013 **Phone** 847/639-6400 **Fax** 847/639-1469
E-mail info@coilcraft.com **Web** http://www.coilcraft.com

S-Parameter files
ON OUR WEB SITE OR CD

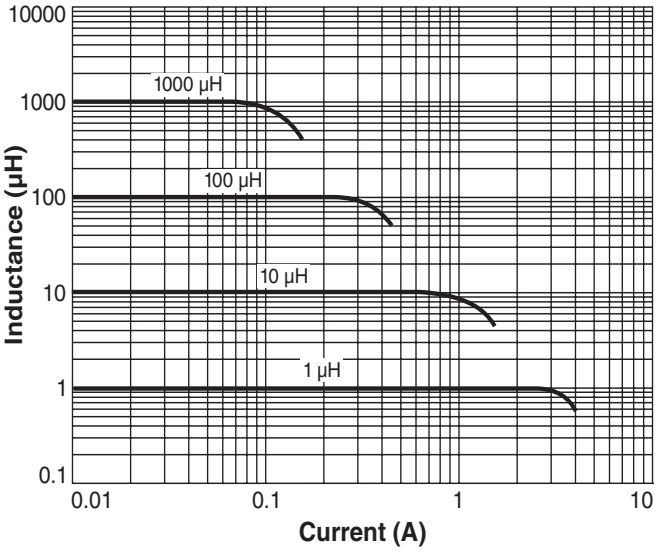
SPICE models
ON OUR WEB SITE OR CD

Power Chip Inductors - 1812PS Series

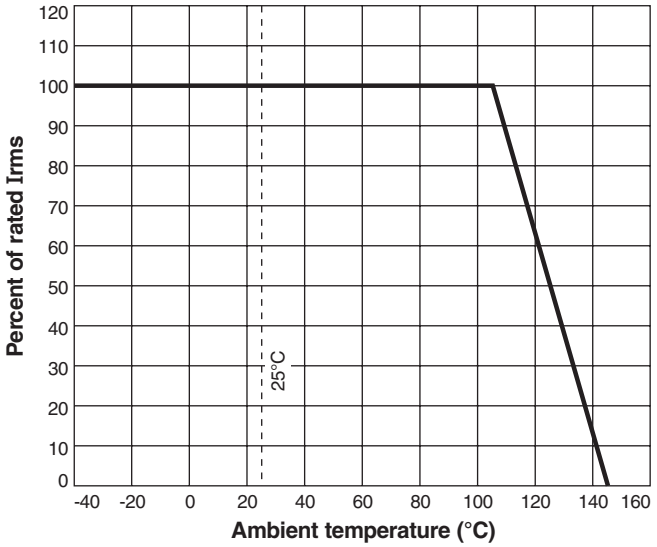
Typical L vs Frequency

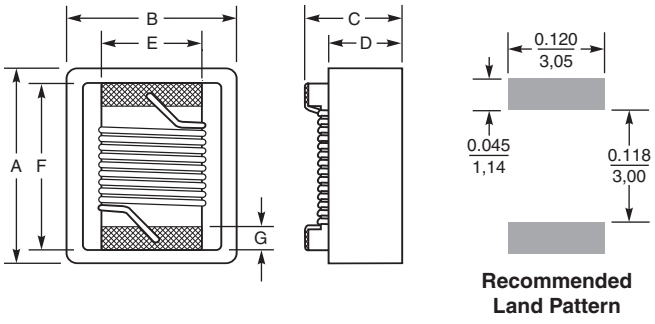


Typical L vs Current



Irms Derating





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	inches
5,87	4,98	3,81	2,72	2,54	4,52	0,64	mm

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