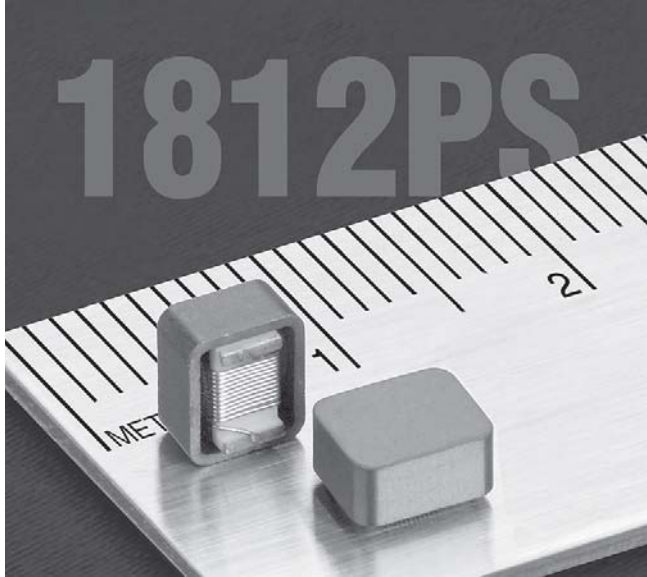




Power Chip Inductors – 1812PS Series



- Economical alternative to larger shielded power inductors.
- Ferrite cover provides magnetic shielding

For new designs, we recommend the LPS4018 or LPS5030 as an alternative to this series. They offer better current handling, lower DCR, a lower profile and a smaller footprint. We will continue to manufacture and support the 1812PS.

S-Parameter files
ON OUR WEB SITE OR CD

SPICE models
ON OUR WEB SITE OR CD

Part number ¹	L ² (μ H)	% 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

- 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).
- Inductance measured at 100 kHz, 0.1 Vrms, using a Coilcraft SMD-A fixture in an Agilent/HP 4263B LCR meter.
 - Tolerances in bold are stocked for immediate shipment.
 - Q measured at 1 MHz on an Agilent/HP 4291 with an Agilent/HP 16193 test fixture.
 - DCR measured on 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.
 - Current that causes a 40°C temperature rise from 25°C ambient.
 - Electrical specifications at 25°C.
- Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

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

Coilcraft[®]

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

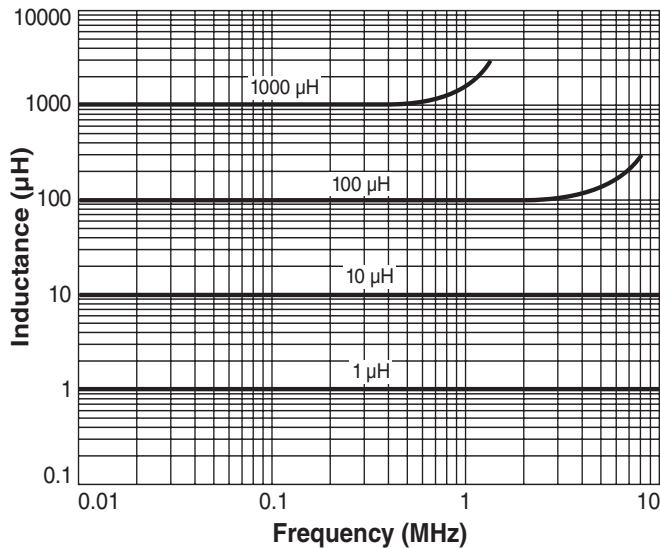
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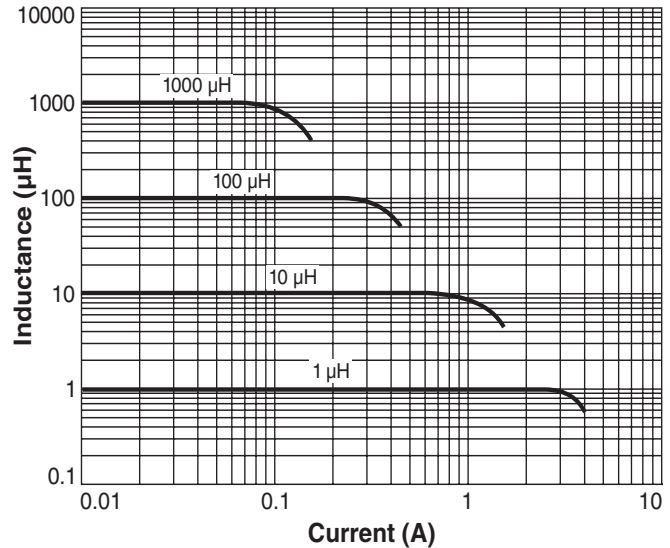


Power Chip Inductors - 1812PS Series

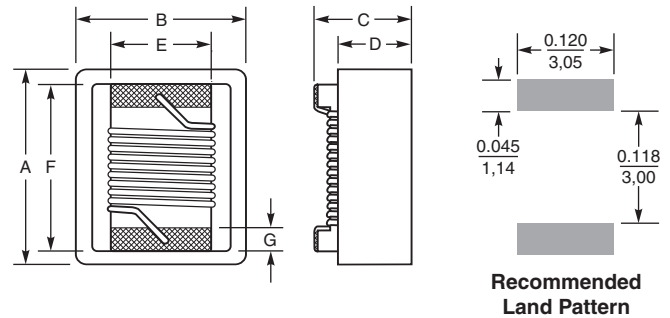
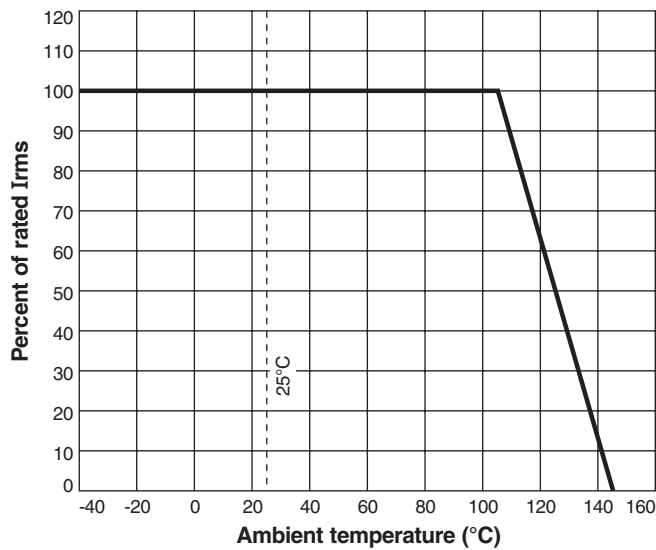
Typical L vs Frequency



Typical L vs Current



Irms Derating



A	B	C	D	E	F	G	
max	max	max	ref	ref	ref		inches
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	mm

- Core material** Ceramic/Ferrite
- Core and winding loss** See www.coilcraft.com/coreloss
- 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, +105°C to +145°C with derated current
- Storage temperature** Component: -40°C to +145°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)** +200 to +700 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)** 38 per billion hours / 26,315,789 hours, calculated per Telcordia SR-332
- 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



Specifications subject to change without notice. Please check our website for latest information. Document 252-2 Revised 08/17/09