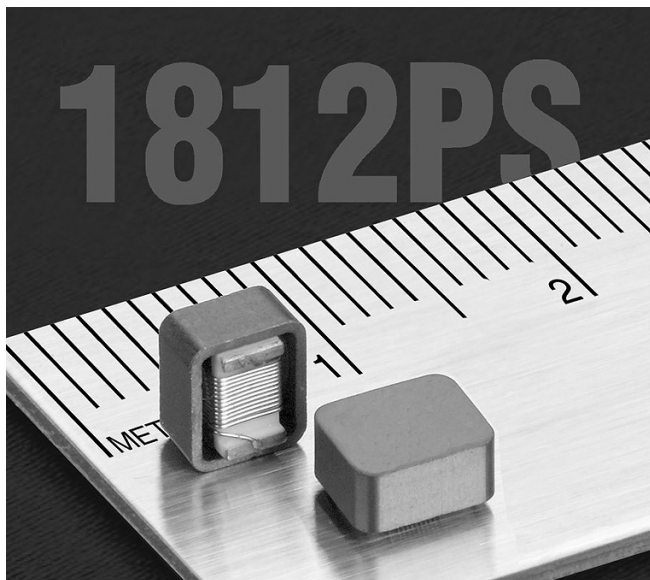




Shielded High SRF Inductors – 1812PS



- Higher SRF than our other power inductors
- High inductance with tight tolerance
- Excellent current handling for a part this size

Core material Ceramic/Ferrite

Core and winding loss See www.coilcraft.com/coreloss

Terminations RoHS compliant silver-palladium-platinum-glass frit.

Weight 286– 323 mg

Ambient temperature –40°C to +105°C with I_{rms} 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

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

- When ordering, specify **tolerance** and **packaging** codes:

1812PS-105JLC

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

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 WEB SITE **TEST FIXTURES**



www.coilcraft.com

US +1-847-639-6400 sales@coilcraft.com
UK +44-1236-730595 sales@coilcraft-europe.com
Taiwan +886-2-2264 3646 sales@coilcraft.com.tw
China +86-21-6218 8074 sales@coilcraft.com.cn
Singapore + 65-6484 8412 sales@coilcraft.com.sg

Document 252-1 Revised 01/23/12

© Coilcraft Inc. 2012

This product may not be used in medical of high risk applications without prior Coilcraft approval. Specification subject to change without notice. Please check out web site for latest information.



Power Chip Inductors - 1812PS Series

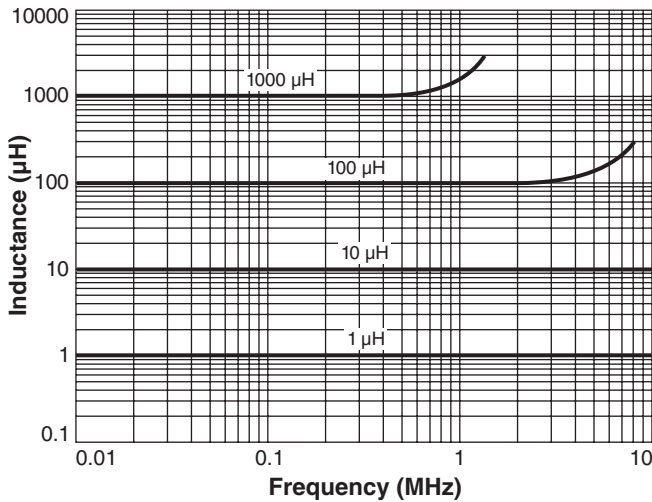
S-Parameter files

ON OUR WEB SITE

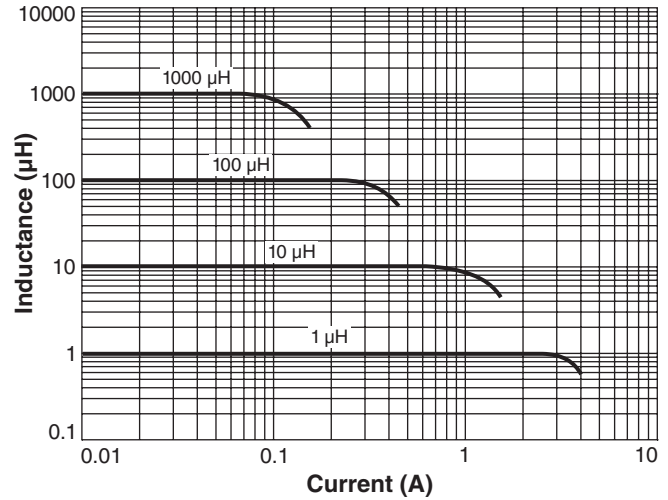
SPICE models

ON OUR WEB SITE

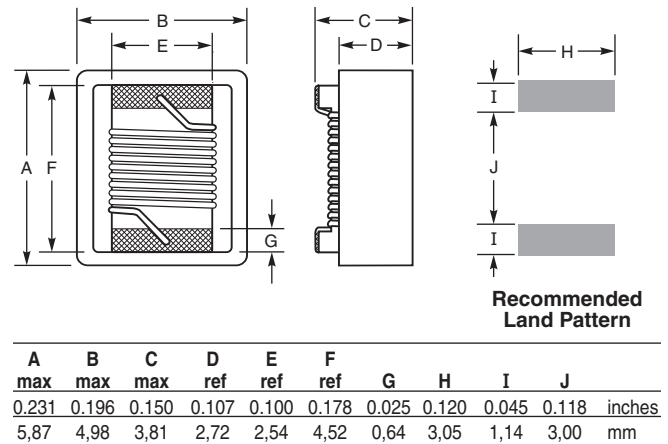
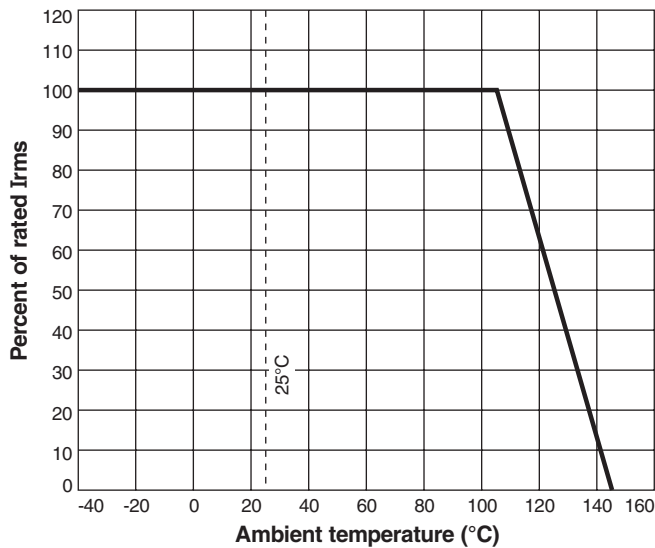
Typical L vs Frequency



Typical L vs Current



Irms Derating


www.coilcraft.com

US +1-847-639-6400 sales@coilcraft.com
UK +44-1236-730595 sales@coilcraft-europe.com
Taiwan +886-2-2264 3646 sales@coilcraft.com.tw
China +86-21-6218 8074 sales@coilcraft.com.cn
Singapore + 65-6484 8412 sales@coilcraft.com.sg

Document 252-2 Revised 01/23/12

© Coilcraft Inc. 2012

This product may not be used in medical of high risk applications without prior Coilcraft approval. Specification subject to change without notice. Please check out web site for latest information.