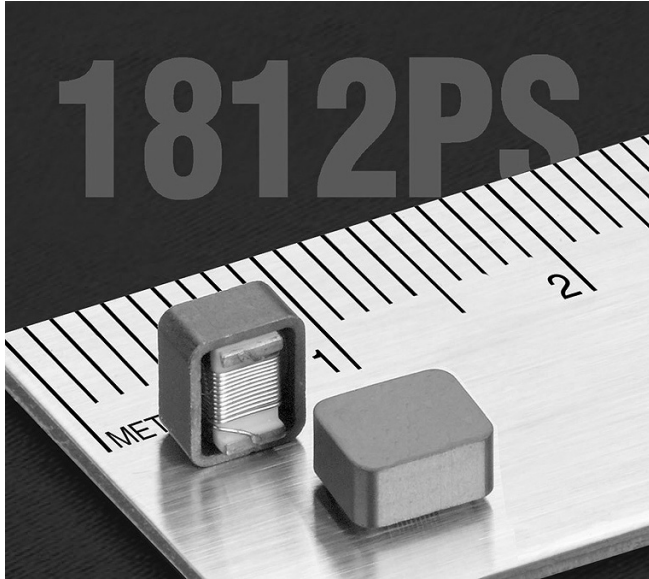




# Shielded High SRF Inductors – 1812PS



- 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](http://www.coilcraft.com/coreloss)

**Environmental** RoHS compliant, halogen free optional

**Terminations** Silver-palladium-platinum-glass frit. Other terminations available at additional cost.

**Weight** 286– 323 mg

**Ambient temperature** –40°C to +105°C with (40°C rise) Irms current.

**Maximum part temperature** +145°C (ambient + temp rise). [Derating](#).

**Storage temperature** Component: –40°C to +145°C.

Tape and reel 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

**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

**PCB washing** Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787\\_PCB\\_Washing.pdf](#).

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

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

**1812PS-105JLC**

**Tolerance:** J = 5% K = 10%

(Table shows stock tolerances in bold.)

**Terminations:** L = RoHS compliant, not halogen-free. Silver-palladium-platinum-glass frit terminations

R = Halogen free component. Matte tin over nickel over silver-platinum-glass frit terminations.

**Packaging:** C = 7" machine-ready reel. EIA-481 embossed plastic tape (600 parts per full reel). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer (\$25 charge).

D = 13" machine-ready reel. EIA-481 embossed plastic tape. Factory order only, not stocked (2200 parts per full reel)

B = Less than full reel. In an effort to simplify our part numbering system, Coilcraft is eliminating the need for multiple packaging codes. When ordering, simply change the last letter of your part number from B to C.

2. Inductance measured at 100 kHz, 0.1 Vrms, using a Coilcraft SMD-A fixture in an Agilent/HP 4263B LCR meter.
3. Tolerances in bold are stocked for immediate shipment.
4. Q measured at 1 MHz on an Agilent/HP 4291 with an Agilent/HP 16193 test fixture.
5. DCR measured on micro-ohmmeter and a Coilcraft CCF840 test fixture.
6. SRF measured using an Agilent/HP 8753D network analyzer and a Coilcraft SMD-D test fixture.
7. DC current at 25°C that causes an inductance drop of 10% (typ) from its value without current. [Click for temperature derating information](#).
8. Current that causes the a 40°C temperature rise from 25°C ambient. This information is for reference only and does not represent absolute maximum ratings. [Click for temperature derating information](#).
9. Electrical specifications at 25°C.

Refer to Doc362 "Soldering Surface Mount Components" before soldering.

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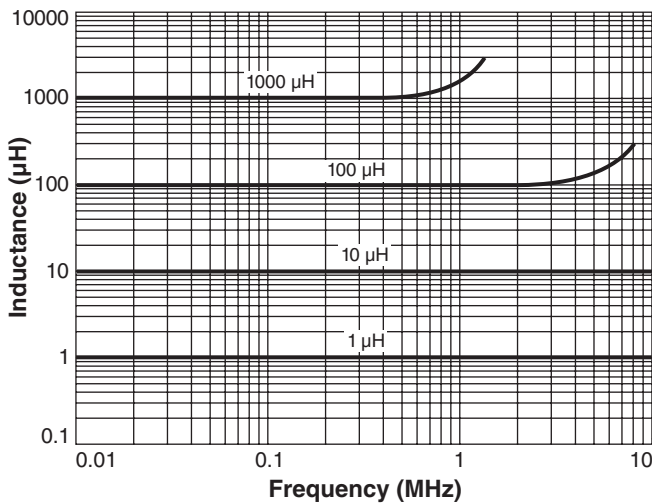
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**S-Parameter files**  
ON OUR WEB SITE  
**SPICE models**  
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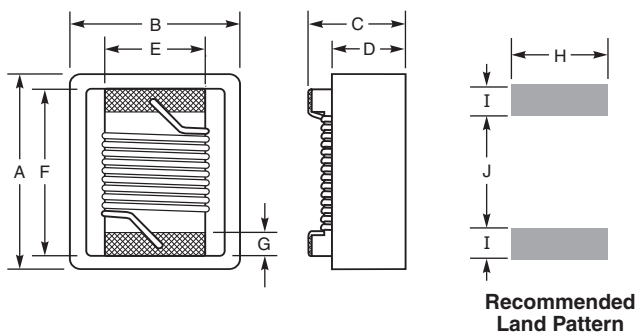
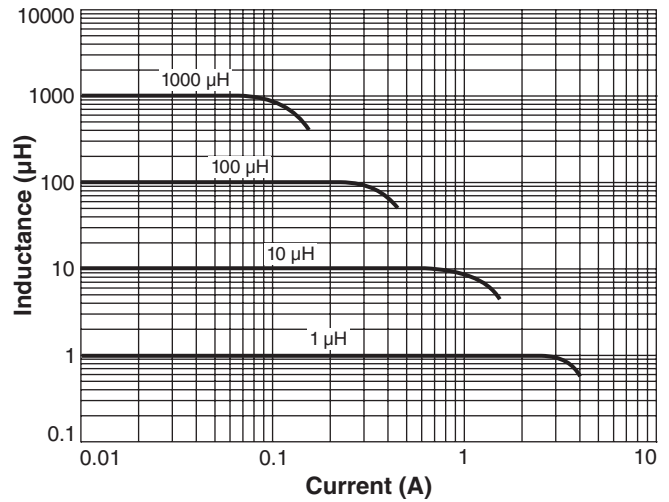


# Power Chip Inductors - 1812PS Series

## Typical L vs Frequency



## Typical L vs Current



A	B	C	D	E	F	G	H	I	J	
max	max	max	ref	ref	ref					inches
0.231	0.196	0.150	0.107	0.100	0.178	0.025	0.120	0.045	0.118	
5,87	4,98	3,81	2,72	2,54	4,52	0,64	3,05	1,14	3,00	mm

**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



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