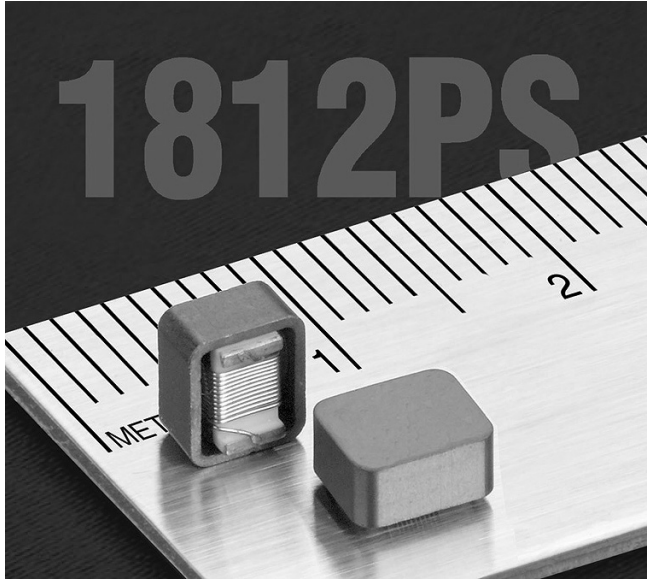




Shielded High SRF Inductors – 1812PS



- 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

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 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, 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).

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 25°C that causes an inductance drop of 10% (typ) from its value without current. [Click for temperature derating information](#).
- 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](#).
- Electrical specifications at 25°C.
Refer to Doc.362 "Soldering Surface Mount Components" before soldering.

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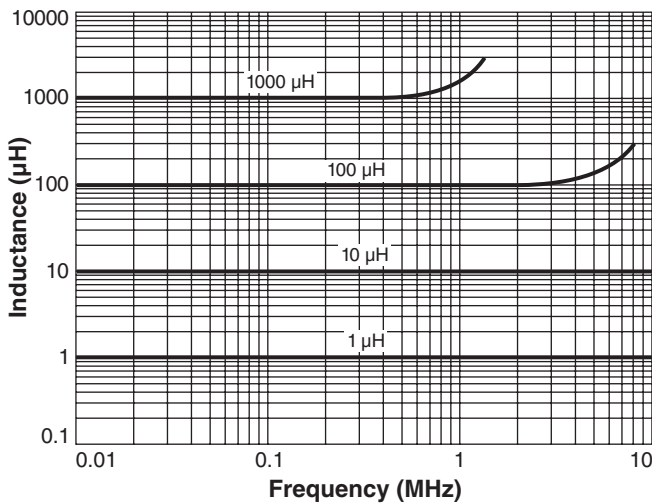
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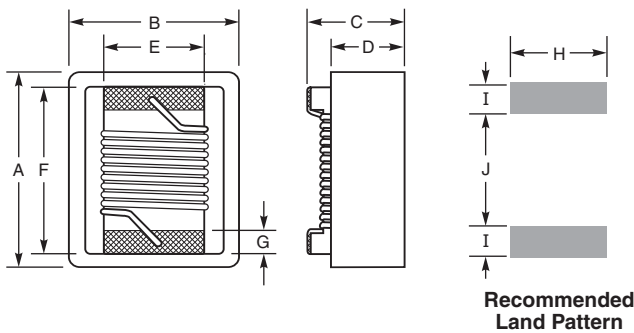
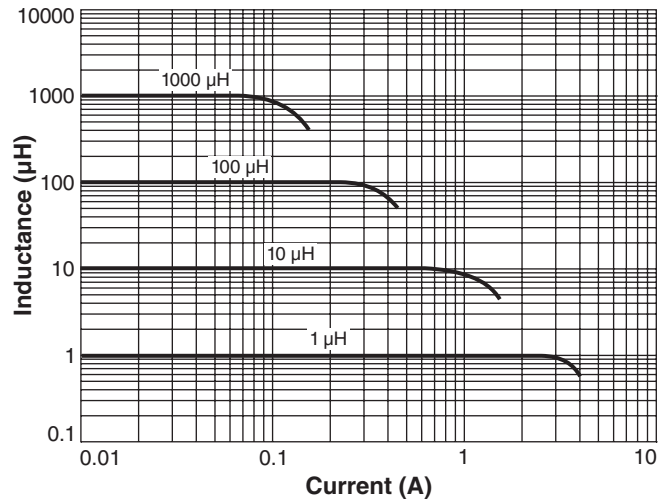
S-Parameter files
ON OUR WEB SITE
SPICE models
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Power Chip Inductors - 1812PS Series

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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[MLZ1608M150WTD25](#) [MLZ1608M3R3WTD25](#) [MLZ1608M3R3WT000](#) [MLZ1608M150WT000](#) [MLZ1608A1R5WT000](#)

[MLZ1608N1R5LT000](#) [B82432C1333K000](#) [PCMB053T-1R0MS](#) [PCMB053T-1R5MS](#) [PCMB104T-1R5MS](#) [CR32NP-100KC](#) [CR32NP-](#)

[151KC](#) [CR32NP-180KC](#) [CR32NP-181KC](#) [CR32NP-1R5MC](#) [CR32NP-390KC](#) [CR32NP-3R9MC](#) [CR32NP-680KC](#) [CR32NP-820KC](#)

[CR32NP-8R2MC](#) [CR43NP-390KC](#) [CR43NP-560KC](#) [CR43NP-680KC](#) [CR54NP-181KC](#) [CR54NP-470LC](#) [CR54NP-820KC](#) [CR54NP-8R5MC](#)

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[62892NL](#) [PE-92100NL](#) [PG0434.801NLT](#) [PG0936.113NLT](#) [PM06-2N7](#) [PM06-39NJ](#) [HC2LP-R47-R](#) [HC2-R47-R](#) [HC3-2R2-R](#) [HC8-1R2-R](#)