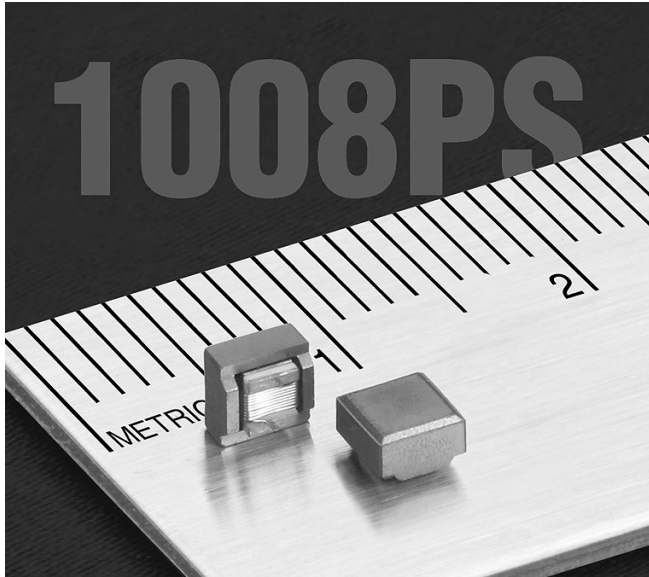




Shielded High SRF Inductors – 1008PS



- 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 RoHS compliant matte tin over nickel over silver platinum-glass frit. Other terminations available at additional cost.

Weight 122– 132 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)

Packaging 750/7" reel; 2500/13" reel Plastic tape: 12 mm wide, 0.3 mm thick, 8 mm pocket spacing, 3.3 mm pocket depth

PCB washing Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787_PCB_Washing.pdf](#).

| Part number ¹ | Inductance ±10% ² (µH) | Q min ³ | DCR ⁴ max (Ohms) | SRF ⁵ typ (MHz) | Isat (A) ⁶ | | | Irms (A) ⁷ | |
|--------------------------|-----------------------------------|--------------------|-----------------------------|----------------------------|-----------------------|----------|----------|-----------------------|-----------|
| | | | | | 10% drop | 20% drop | 30% drop | 20°C rise | 40°C rise |
| 1008PS-102KR_ | 1.0 | 35 | 0.05 | 387 | 3.5 | 3.9 | 4.2 | 1.4 | 2.0 |
| 1008PS-152KR_ | 1.5 | 35 | 0.06 | 276 | 2.7 | 3.2 | 3.5 | 1.4 | 2.0 |
| 1008PS-182KR_ | 1.8 | 35 | 0.09 | 253 | 2.3 | 2.7 | 3.0 | 0.98 | 1.4 |
| 1008PS-222KR_ | 2.2 | 36 | 0.10 | 228 | 2.4 | 2.8 | 3.1 | 1.2 | 1.7 |
| 1008PS-272KR_ | 2.7 | 38 | 0.14 | 207 | 1.6 | 2.0 | 2.3 | 1.0 | 1.4 |
| 1008PS-332KR_ | 3.3 | 26 | 0.84 | 199 | 1.5 | 1.6 | 1.6 | 0.51 | 0.67 |
| 1008PS-392KR_ | 3.9 | 38 | 0.26 | 185 | 1.5 | 1.8 | 2.0 | 0.82 | 1.1 |
| 1008PS-472KR_ | 4.7 | 38 | 0.35 | 160 | 1.3 | 1.6 | 1.7 | 0.70 | 0.95 |
| 1008PS-562KR_ | 5.6 | 38 | 0.36 | 150 | 1.5 | 1.7 | 1.8 | 0.66 | 0.87 |
| 1008PS-682KR_ | 6.8 | 38 | 0.58 | 120 | 1.3 | 1.5 | 1.6 | 0.45 | 0.76 |
| 1008PS-103KR_ | 10 | 38 | 0.92 | 105 | 0.84 | 1.0 | 1.1 | 0.40 | 0.59 |
| 1008PS-153KR_ | 15 | 38 | 1.15 | 35 | 0.81 | 0.87 | 0.90 | 0.36 | 0.51 |
| 1008PS-223KR_ | 22 | 40 | 1.40 | 26 | 0.67 | 0.75 | 0.79 | 0.33 | 0.44 |
| 1008PS-333KR_ | 33 | 45 | 1.61 | 20 | 0.53 | 0.61 | 0.68 | 0.30 | 0.42 |
| 1008PS-393KR_ | 39 | 45 | 1.85 | 16 | 0.49 | 0.56 | 0.60 | 0.28 | 0.39 |
| 1008PS-473KR_ | 47 | 45 | 2.5 | 19 | 0.47 | 0.52 | 0.54 | 0.23 | 0.31 |
| 1008PS-683KR_ | 68 | 45 | 3.8 | 12 | 0.38 | 0.42 | 0.45 | 0.21 | 0.26 |
| 1008PS-823KR_ | 82 | 45 | 4.3 | 9.0 | 0.33 | 0.38 | 0.42 | 0.18 | 0.26 |
| 1008PS-104KR_ | 100 | 45 | 5.8 | 7.0 | 0.35 | 0.38 | 0.39 | 0.16 | 0.20 |
| 1008PS-124KR_ | 120 | 50 | 6.3 | 7.0 | 0.30 | 0.33 | 0.35 | 0.14 | 0.20 |
| 1008PS-154KR_ | 150 | 50 | 7.5 | 5.8 | 0.27 | 0.30 | 0.33 | 0.13 | 0.18 |
| 1008PS-224KR_ | 220 | 55 | 10.0 | 5.0 | 0.21 | 0.24 | 0.27 | 0.13 | 0.17 |
| 1008PS-334KR_ | 330 | 55 | 11.5 | 3.8 | 0.19 | 0.21 | 0.23 | 0.11 | 0.15 |
| 1008PS-474KR_ | 470 | 55 | 16.3 | 3.1 | 0.14 | 0.17 | 0.19 | 0.10 | 0.13 |
| 1008PS-564KR_ | 560 | 55 | 18.1 | 2.8 | 0.13 | 0.15 | 0.17 | 0.093 | 0.12 |
| 1008PS-684KR_ | 680 | 55 | 24.0 | 2.5 | 0.11 | 0.15 | 0.17 | 0.073 | 0.11 |
| 1008PS-824KR_ | 820 | 45 | 26.0 | 1.5 | 0.10 | 0.12 | 0.13 | 0.073 | 0.10 |
| 1008PS-105KR_ | 1000 | 45 | 29.0 | 2.0 | 0.11 | 0.13 | 0.14 | 0.070 | 0.10 |

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

1008PS-105KRC

Terminations: **R** = Halogen free component. Matte tin over nickel over silver-platinum-glass frit.

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

Packaging: **C** = 7" machine-ready reel. EIA-481 embossed plastic tape (750 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 (2500 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 Coilcraft SMD-A fixture in Agilent/HP 4263B impedance analyzer or equivalent.

3. Q measured at 1 MHz using an Agilent/HP 16193 test fixture and an Agilent/HP 4291 or equivalent.

4. DCR measured on micro-ohmmeter and Coilcraft CCF840 test fixture.

5. SRF measured using a Coilcraft SMD-D test fixture and an Agilent/HP 8753D network analyzer or equivalent.

6. DC current at 25°C that causes the specified inductance drop from its value without current.

[Click for temperature derating information.](#)

7. Current that causes the specified temperature rise from 25°C ambient. This information is for reference only and does not represent absolute maximum ratings.

[Click for temperature derating information.](#)

8. Electrical specifications at 25°C.

Refer to Doc 362 "Soldering Surface Mount Components" before soldering.



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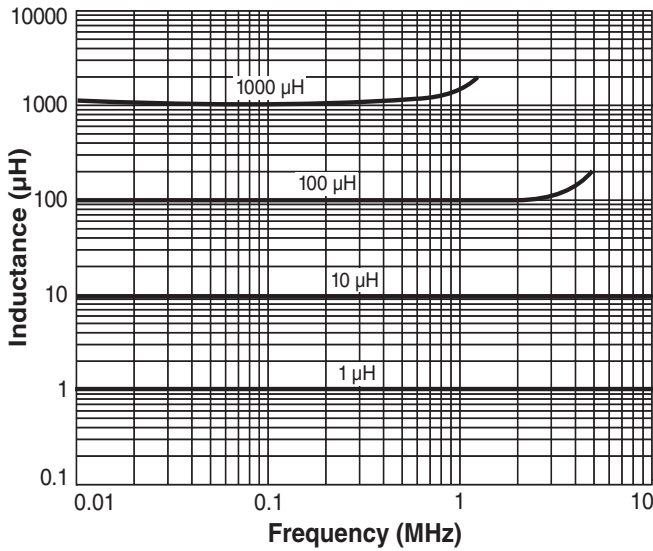
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This product may not be used in medical or high risk applications without prior Coilcraft approval. Specification subject to change without notice. Please check web site for latest information.

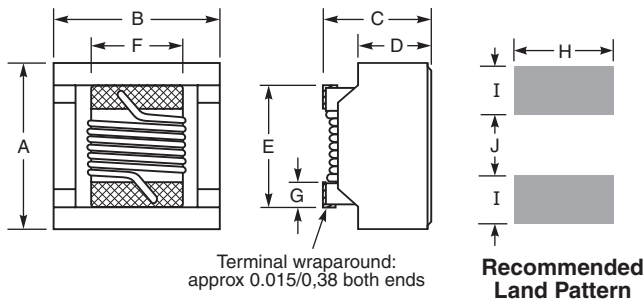
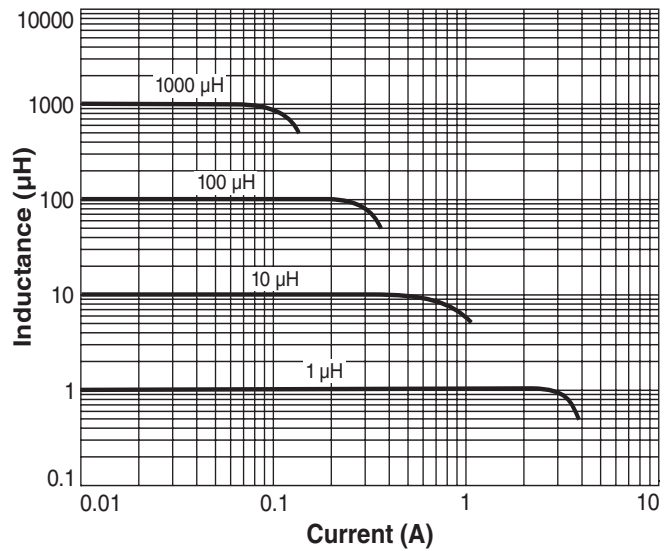
S-Parameter files
ON OUR WEB SITE
SPICE models
ON OUR WEB SITE

Power Chip Inductors – 1008PS Series

Typical L vs Frequency



Typical L vs Current



| A | B | C | D | E | F | G | H | I | J | |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| max | max | max | max | max | max | typ | | | | inches |
| 0.150 | 0.149 | 0.108 | 0.070 | 0.102 | 0.084 | 0.020 | 0.100 | 0.040 | 0.050 | |
| 3,81 | 3,78 | 2,74 | 1,78 | 2,59 | 2,13 | 0,51 | 2,54 | 1,02 | 1,27 | mm |

