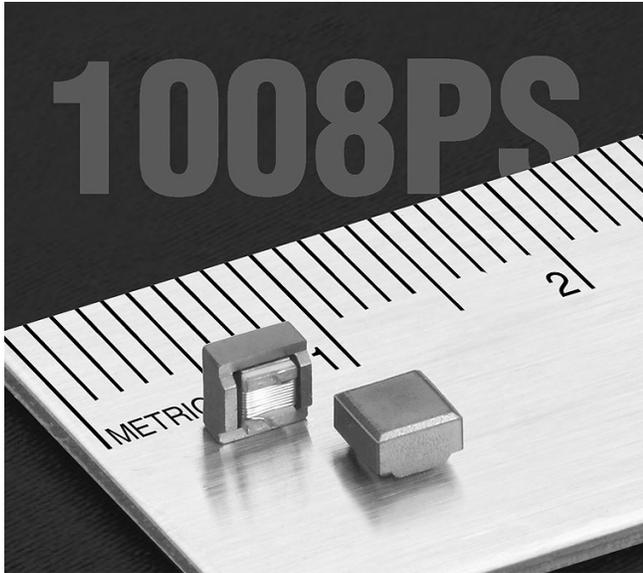




Shielded High SRF Inductors – 1008PS



- 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

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

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)

Failures in Time (FIT) / Mean Time Between Failures (MTBF)

38 per billion hours / 26,315,789 hours, calculated per Telcordia SR-332

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

1. When ordering, specify **packaging** code:

1008PS-105KLC

Packaging: C= 7" machine-ready reel. EIA-481 embossed plastic tape (750 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 (2500 parts per full reel).

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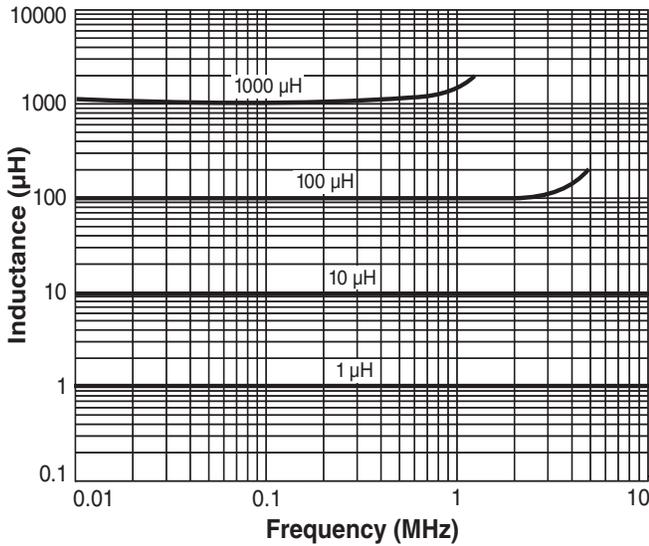
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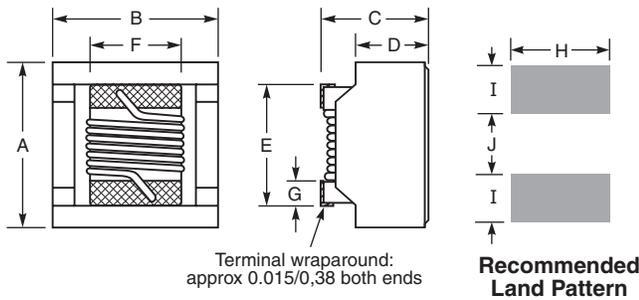
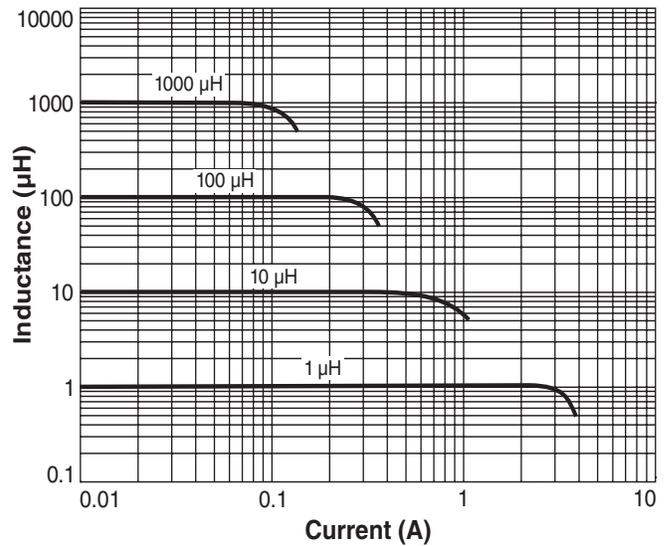
S-Parameter files
ON OUR WEB SITE
SPICE models
ON OUR WEB SITE

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 | | | |
| 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 |
| | | | | | | | | | inches |
| | | | | | | | | | mm |

