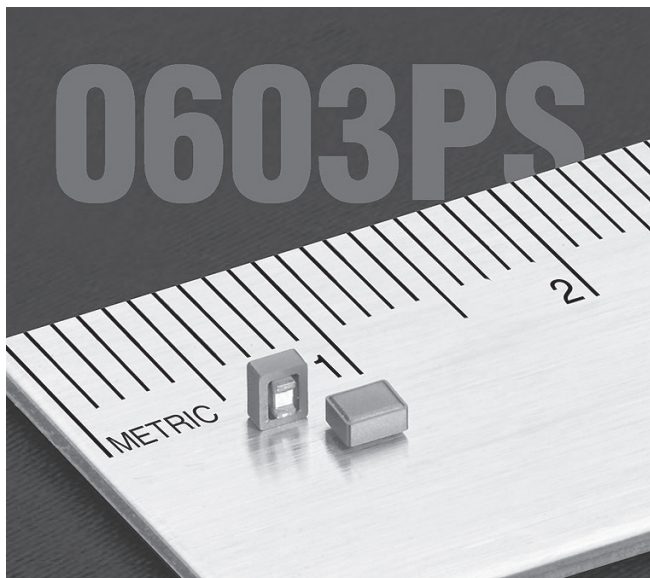




# Shielded High SRF Inductors – 0603PS



- 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)

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

**Weight** 26.4– 27.9 mg

**Ambient temperature** –40°C to +65°C with Irms current, +65°C to +105°C with derated current

**Storage temperature** Component: –40°C to +105°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** 2000/7" reel; 7500/13" reel Plastic tape: 8 mm wide, 0.23 mm thick, 4 mm pocket spacing, 1.8 mm pocket depth

**PCB washing** Only pure water or alcohol recommended

| Part number <sup>1</sup> | $L \pm 10\%^2$<br>( $\mu$ H) | $Q_{min}^3$<br>at 1 MHz | DCR <sup>4</sup><br>max<br>(Ohms) | SRF <sup>5</sup><br>typ<br>(MHz) | Isat <sup>6</sup><br>(A) | Irms <sup>7</sup><br>(A) |
|--------------------------|------------------------------|-------------------------|-----------------------------------|----------------------------------|--------------------------|--------------------------|
| 0603PS-781KL             | 0.78                         | 15                      | 0.24                              | 475                              | 0.55                     | 1.30                     |
| 0603PS-102KL             | 1.0                          | 15                      | 0.26                              | 390                              | 0.40                     | 1.00                     |
| 0603PS-182KL             | 1.8                          | 15                      | 0.54                              | 155                              | 0.39                     | 0.70                     |
| 0603PS-222KL             | 2.2                          | 15                      | 0.75                              | 245                              | 0.33                     | 0.60                     |
| 0603PS-272KL             | 2.7                          | 15                      | 0.75                              | 127                              | 0.33                     | 0.55                     |
| 0603PS-332KL             | 3.3                          | 15                      | 0.88                              | 72                               | 0.32                     | 0.50                     |
| 0603PS-392KL             | 3.9                          | 15                      | 1.00                              | 72                               | 0.27                     | 0.48                     |
| 0603PS-472KL             | 4.7                          | 15                      | 1.08                              | 64                               | 0.26                     | 0.47                     |
| 0603PS-562KL             | 5.6                          | 15                      | 1.23                              | 51                               | 0.25                     | 0.41                     |
| 0603PS-682KL             | 6.8                          | 15                      | 1.37                              | 39                               | 0.23                     | 0.40                     |
| 0603PS-822KL             | 8.2                          | 20                      | 1.43                              | 30                               | 0.22                     | 0.39                     |
| 0603PS-103KL             | 10                           | 20                      | 1.60                              | 30                               | 0.21                     | 0.38                     |
| 0603PS-153KL             | 15                           | 20                      | 1.92                              | 22                               | 0.16                     | 0.35                     |
| 0603PS-223KL             | 22                           | 20                      | 2.96                              | 16                               | 0.13                     | 0.27                     |
| 0603PS-333KL             | 33                           | 20                      | 5.63                              | 12                               | 0.10                     | 0.20                     |
| 0603PS-473KL             | 47                           | 20                      | 5.69                              | 12                               | 0.10                     | 0.18                     |

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

**0603PS-473KLC**

**Packaging:** **C** = 7" machine-ready reel. EIA-481 embossed plastic tape (2000 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 (7500 parts per full reel).

2. Inductance measured at 100 kHz, 0.1 Vrms, using a Coilcraft SMD-A fixture in an Agilent/HP 4263B LCR meter.

3. Q measured on an Agilent/HP 4291 with an Agilent/HP 16193 test fixture.

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

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

6. DC current at which the inductance drops 10% (typ) from its value without current.

7. Current that causes a 40°C temperature rise from 25°C ambient.

8. Electrical specifications at 25°C.

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



[www.coilcraft.com](http://www.coilcraft.com)

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**COILCRAFT** ACCURATE  
**PRECISION** REPEATABLE  
MEASUREMENTS  
SEE WEB SITE **TEST FIXTURES**

Document 266-1 Revised 03/14/12

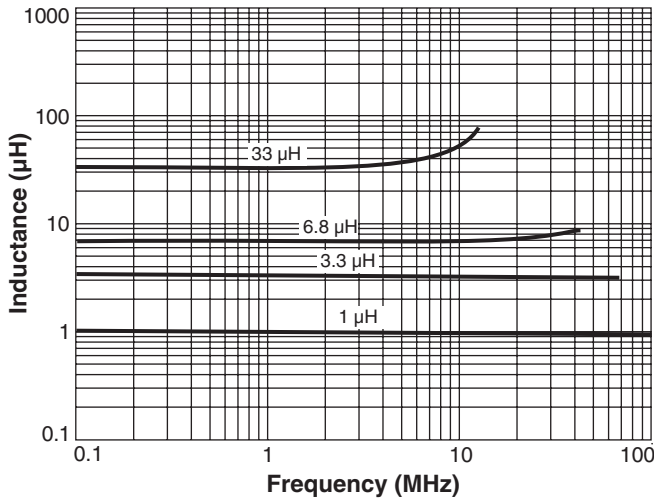
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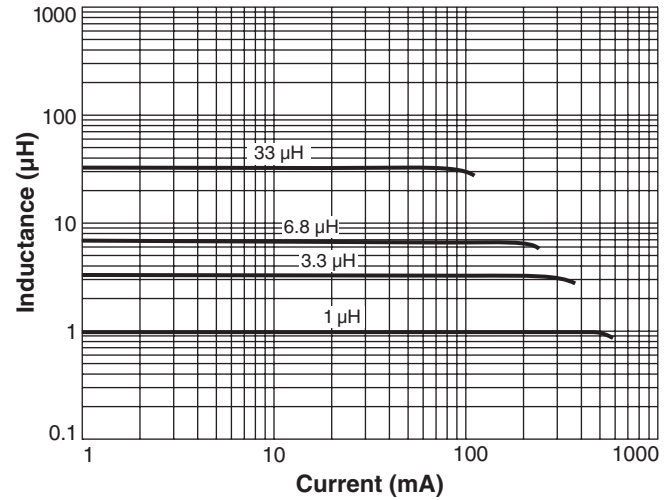


# Power Chip Inductors - 0603PS Series

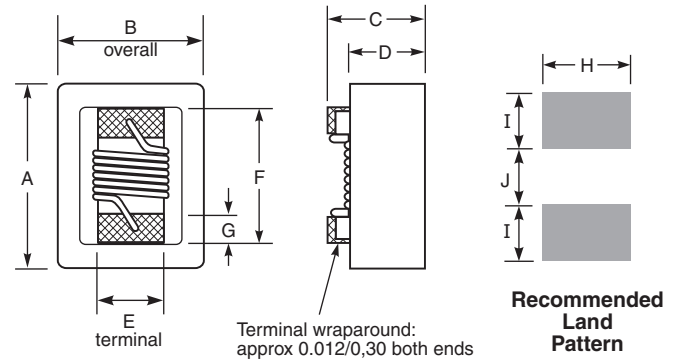
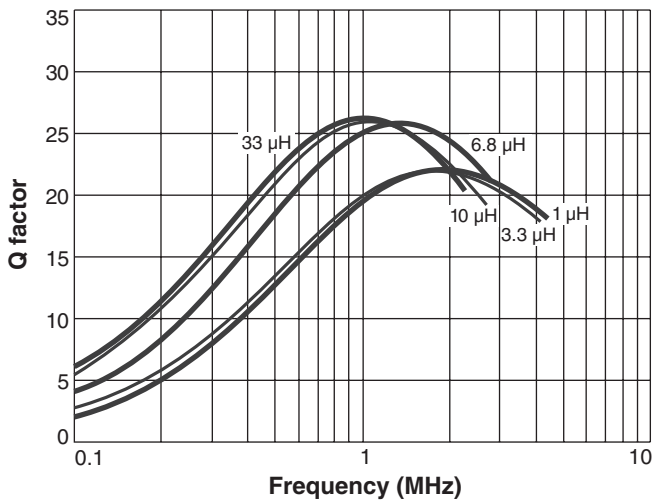
## Typical L vs Frequency



## Typical L vs Current

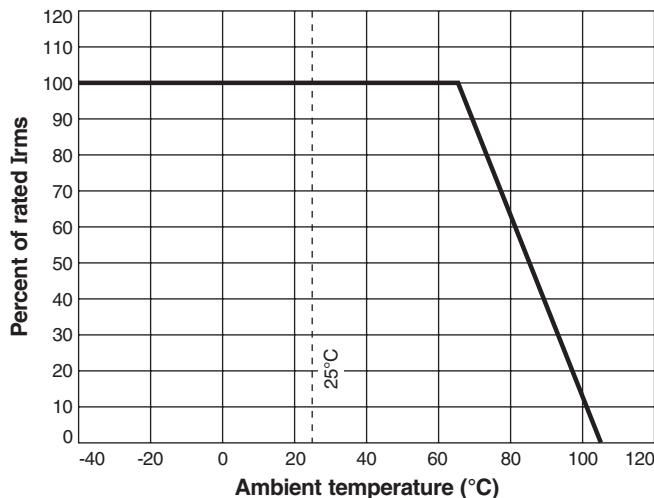


## Typical Q vs Frequency



| A     | B     | C     | D     | E     | F     | G     | H     | I     | J     |        |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| max   | max   | max   |       |       |       |       |       |       |       | inches |
| 0.102 | 0.082 | 0.071 | 0.049 | 0.030 | 0.060 | 0.013 | 0.040 | 0.025 | 0.025 |        |
| 2,59  | 2,08  | 1,80  | 1,24  | 0,76  | 1,52  | 0,33  | 1,02  | 0,64  | 0,64  | mm     |

## Irms Derating



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Document 266-2 Revised 03/14/12

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