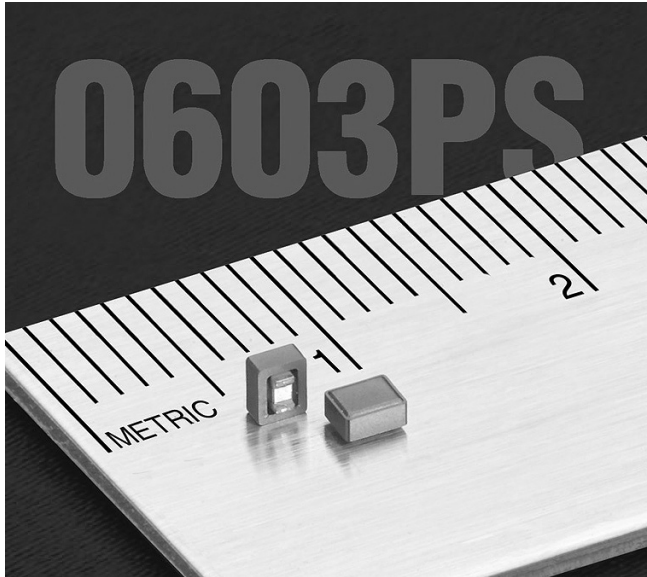




# Shielded High SRF Inductors – 0603PS



- 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)

**Environmental** RoHS compliant; halogen free optional

**Terminations** RoHS matte Sn over Ni over Ag-Pt-glass frit. Other terminations available at additional cost

**Weight** 26.4–27.9 mg

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

**Maximum part temperature** +105°C (ambient + temp rise).

**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)**

0.48 per billion hours / 2.08E+09 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** Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787\\_PCB\\_Washing.pdf](#).

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

- When ordering, please specify **termination** and **packaging** codes:

**0603PS-473KR\_C**

**Termination R** = RoHS matte Sn over Ni over Ag-Pt-glass frit.

RoHS compliance expiring. Last order June 2021:

**L** = Not halogen-free. Ag/Pd/Pt-glass frit. Not for new designs.

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

- Inductance measured at 100 kHz, 0.1 Vrms, using a Coilcraft SMD-A fixture in an Agilent/HP 4263B LCR meter.
  - Q measured on an Agilent/HP 4291 with an Agilent/HP 16193 test fixture.
  - DCR measured on a 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 which the inductance drops 10% (typ) from its value without current.
  - Current that causes a 40°C temperature rise from 25°C ambient. This information is for reference only and does not represent absolute maximum ratings.
  - Electrical specifications at 25°C.
- Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

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



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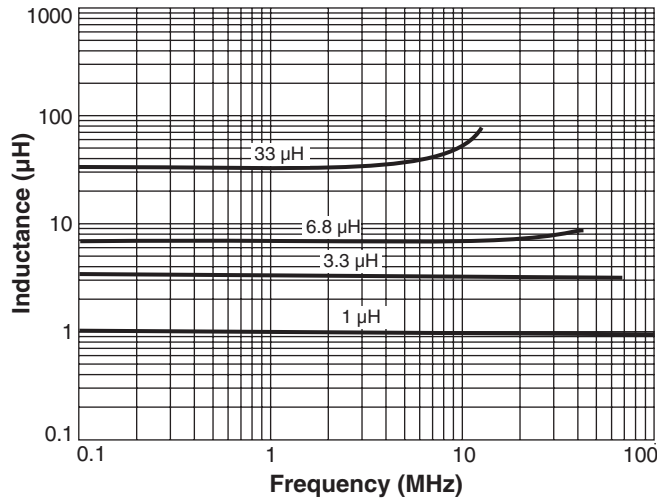
This product may not be used in medical or high risk applications without prior Coilcraft approval. Specification subject to change without notice. Please check web site for latest information.

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

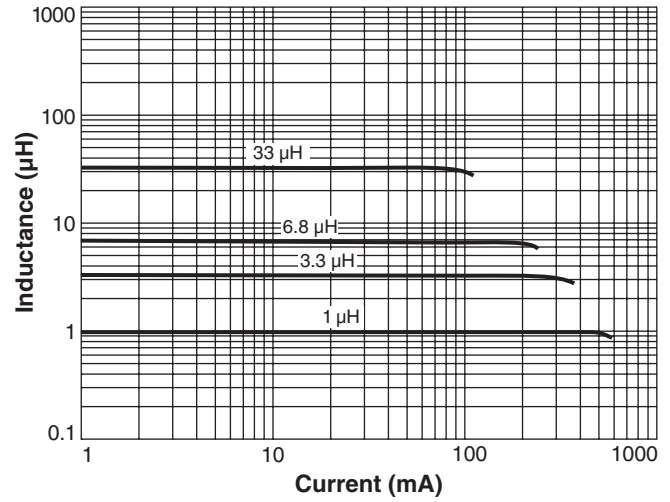


# Power Chip Inductors - 0603PS Series

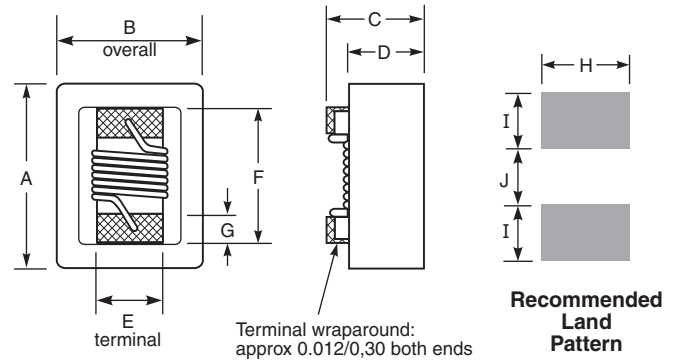
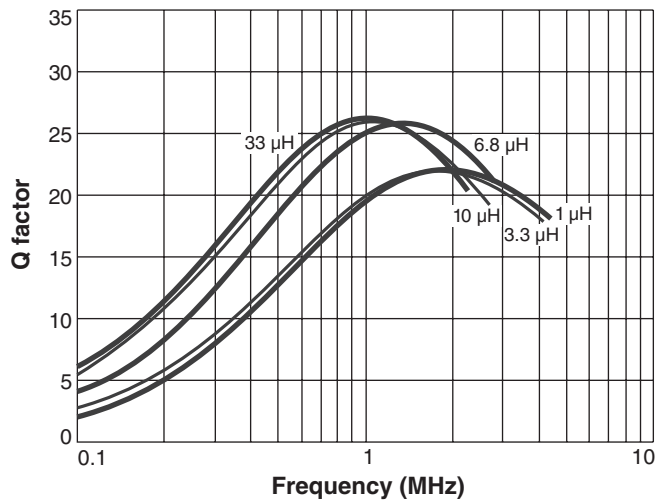
## Typical L vs Frequency



## 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



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