

# Shielded Power Inductors – SER1390



- Exceptionally high current carrying capability
- Low DC resistance
- AEC-200 Grade 3 qualified (–40°C to +85°C ambient)

**Core material** Ferrite

**Core and winding loss** See [www.coilcraft.com/coreloss](http://www.coilcraft.com/coreloss)

**Terminations** RoHS compliant matte tin over nickel over phos bronze. Other terminations available at additional cost.

**Weight** 4.0 – 4.8 g

**Ambient temperature** –40°C to +85°C with (40°C rise) Irms current.

**Maximum part temperature** +125°C (ambient + temp rise). [Derating](#).

**Storage temperature** Component: –40°C to +125°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** 300 per 13" reel; Plastic tape: 24 mm wide, 0.5 mm thick, 20 mm pocket spacing, 9.6 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>	Inductance <sup>2</sup> ±20% (µH)	DCR (mOhm) <sup>3</sup>		SRF typ <sup>4</sup> (MHz)	Isat (A) <sup>5</sup>			Irms (A) <sup>6</sup>	
		typ	max		10% drop	20% drop	30% drop	20°C rise	40°C rise
SER1390-103ML_	10	13.7	15.0	26.9	11.32	12.56	13.16	6.4	9.2
SER1390-153ML_	15	13.7	15.0	24.3	7.20	8.04	8.60	6.4	9.2
SER1390-223ML_	22	21.0	23.1	20.3	6.08	6.80	7.36	5.7	7.7
SER1390-333ML_	33	21.0	23.1	15.7	3.80	4.40	4.76	5.7	7.7
SER1390-473ML_	47	21.0	23.1	13.2	2.60	3.00	3.20	5.7	7.7

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

**SER1390-473MLD**

**Termination:** L = RoHS compliant matte-tin over nickel over phos bronze.

Special order: T = RoHS tin-silver-copper over copper (95.5/4/0.5) or S = non-RoHS tin-lead (63/37).

**Packaging:** D = 13" machine-ready reel. EIA-481 embossed plastic tape (300 parts per full reel). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer (\$25 charge).

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 D.

2. Inductance measured at 100 kHz, 0.1 Vrms, 0 Adc on an Agilent/HP 4284A or equivalent.

3. DCR measured on a micro-ohmmeter.

4. SRF measured using an Agilent/HP 4395A network analyzer and an Agilent/HP 16193A test fixture.

5. DC current at 25°C that causes the specified inductance drop from its value without current. [Click for temperature derating information](#).

6. 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](#).

7. Electrical specifications at 25°C.

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



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

**US** +1-847-639-6400 [sales@coilcraft.com](mailto:sales@coilcraft.com)

**UK** +44-1236-730595 [sales@coilcraft-europe.com](mailto:sales@coilcraft-europe.com)

**Taiwan** +886-2-2264 3646 [sales@coilcraft.com.tw](mailto:sales@coilcraft.com.tw)

**China** +86-21-6218 8074 [sales@coilcraft.com.cn](mailto:sales@coilcraft.com.cn)

**Singapore** + 65-6484 8412 [sales@coilcraft.com.sg](mailto:sales@coilcraft.com.sg)

Document 1096-1 Revised 05/07/20

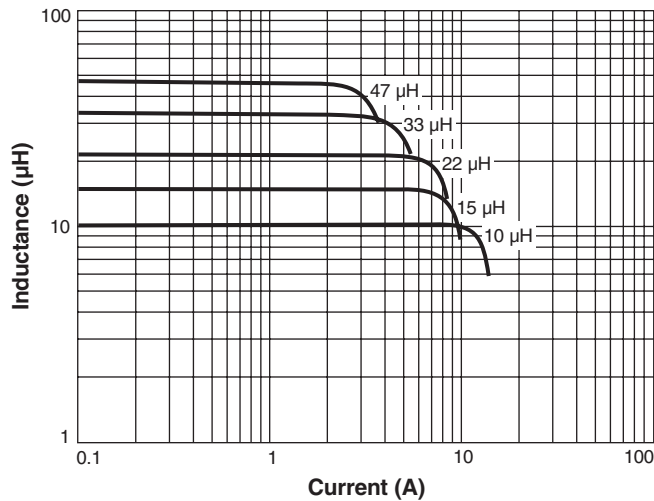
© Coilcraft Inc. 2020

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.

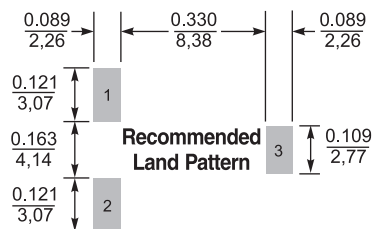
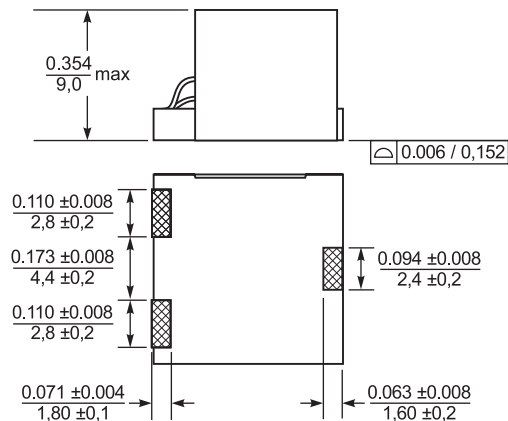
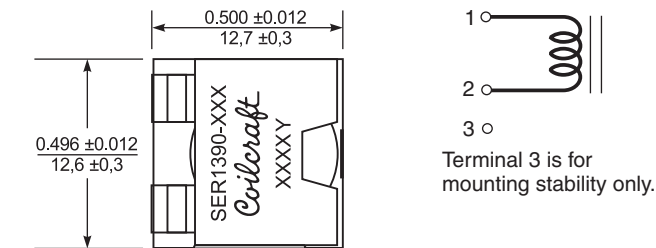
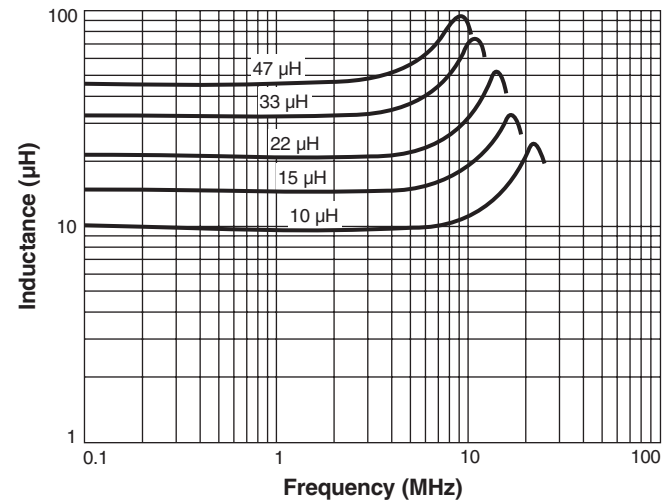


# Shielded Power Inductors – SER1390 Series

## L vs Current



## L vs Frequency



Dimensions are in  $\frac{\text{inches}}{\text{mm}}$



www.coilcraft.com

**US** +1-847-639-6400 sales@coilcraft.com  
**UK** +44-1236-730595 sales@coilcraft-europe.com  
**Taiwan** +886-2-2264 3646 sales@coilcraft.com.tw  
**China** +86-21-6218 8074 sales@coilcraft.com.cn  
**Singapore** + 65-6484 8412 sales@coilcraft.com.sg

Document 1096-2 Revised 05/07/20

© Coilcraft Inc. 2020

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.

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

## Coilcraft:

[SER1390-153MLB](#) [SER1390-153MLD](#) [SER1390-223MLD](#) [SER1390-103MLB](#) [SER1390-473MLB](#) [SER1390-473MLD](#) [SER1390-333MLD](#) [SER1390-223MLB](#) [SER1390-103MLD](#) [SER1390-333MLB](#)