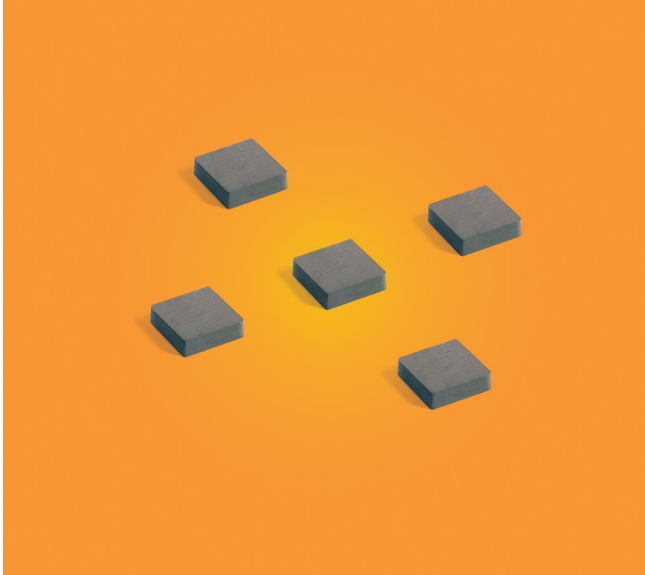


# High Reliability Power Inductors ML390PZA



- High temperature materials allow operation in ambient temperatures up to 155°C
- Low profile, ultra-miniature, shielded power inductor
- Soft saturation makes them ideal for VRM/VRD applications.

**Terminations** Tin-silver-copper over tin over nickel over silver.

**Core material** Composite

**Weight** 44 mg

**Ambient temperature** -55°C to +105°C with Irms current

**Maximum part temperature** +155°C (ambient + temp rise)

**Storage temperature** Component: -55°C to +155°C.  
Tape and reel packaging: -55°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)

**Enhanced crush-resistant packaging** 2000/7" reel  
Plastic tape: 8 mm wide, 0.23 mm thick, 4 mm pocket spacing, 1.14 mm pocket depth

| Part number <sup>1</sup> | Inductance <sup>2</sup><br>±20% (µH) | DCR (Ohms) <sup>3</sup> |     | SRF (MHz) <sup>4</sup> |     | Isat (A) <sup>5</sup> |          |          | Irms (A) <sup>6</sup> |           |
|--------------------------|--------------------------------------|-------------------------|-----|------------------------|-----|-----------------------|----------|----------|-----------------------|-----------|
|                          |                                      | typ                     | max | min                    | typ | 10% drop              | 20% drop | 30% drop | 20°C rise             | 40°C rise |
| ML390PZA601MLZ           | 0.60                                 | 30                      | 33  | 144                    | 180 | 1.8                   | 2.4      | 2.7      | 1.8                   | 2.5       |
| ML390PZA102MLZ           | 1.0                                  | 43                      | 49  | 102                    | 128 | 1.5                   | 2.1      | 2.4      | 1.6                   | 2.3       |
| ML390PZA152MLZ           | 1.5                                  | 71                      | 80  | 77                     | 97  | 1.2                   | 1.6      | 1.9      | 1.4                   | 1.9       |
| ML390PZA222MLZ           | 2.2                                  | 111                     | 122 | 62                     | 78  | 0.94                  | 1.2      | 1.5      | 1.0                   | 1.3       |
| ML390PZA332MLZ           | 3.3                                  | 154                     | 166 | 51                     | 64  | 0.86                  | 1.1      | 1.3      | 0.88                  | 1.2       |
| ML390PZA472MLZ           | 4.7                                  | 217                     | 230 | 45                     | 57  | 0.71                  | 0.97     | 1.1      | 0.84                  | 1.1       |

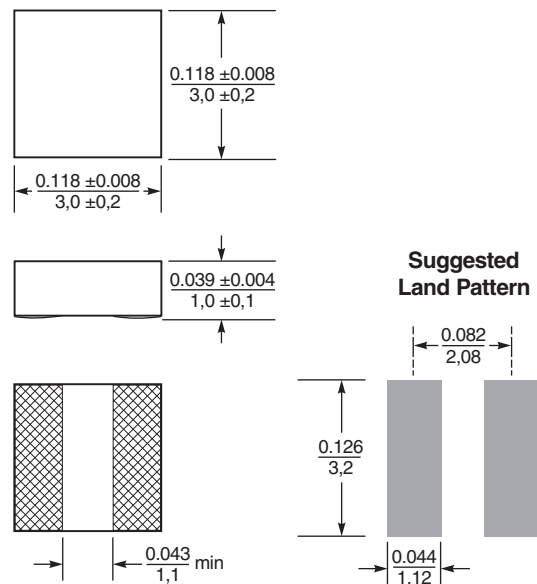
1. When ordering, please specify **testing** code:

**ML390PZA222MLZ**

**Testing:** Z = Unscreened  
H = Group A screening per Coilcraft CP-SA-10001  
All screening performed to the document's latest revision

- Inductance tested at 100 kHz, 0.1 Vrms, 0 Adc.
- DCR measured on a micro-ohmmeter.
- SRF measured using Agilent/HP 4395A or equivalent.
- DC current at 25°C that causes the specified inductance drop from its value without current.
- Current that causes the specified 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.



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

**Coilcraft CPS**  
CRITICAL PRODUCTS & SERVICES

1102 Silver Lake Road  
Cary, IL 60013  
Phone 800-981-0363

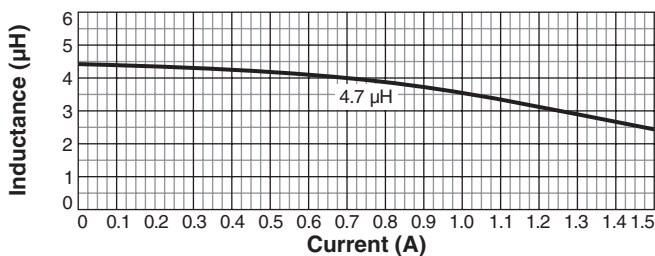
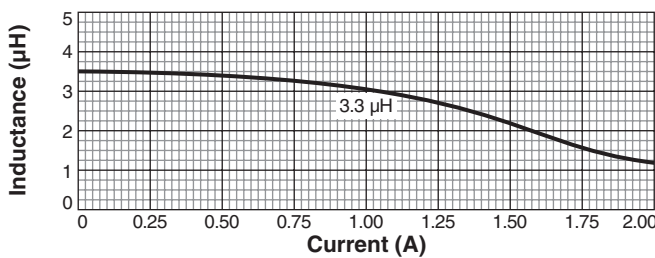
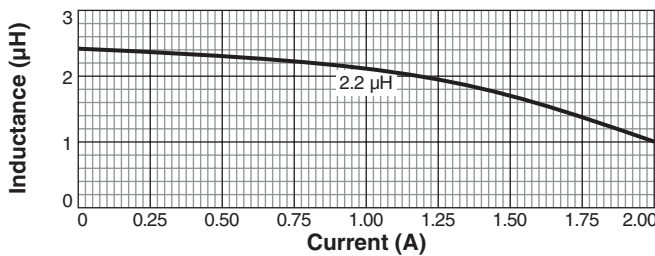
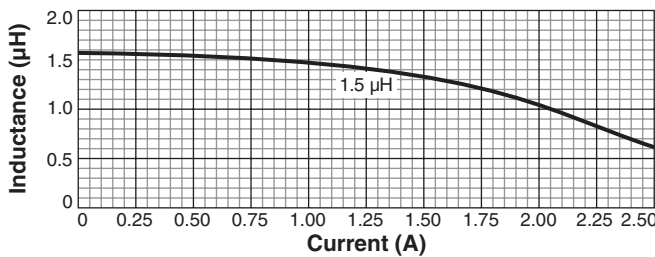
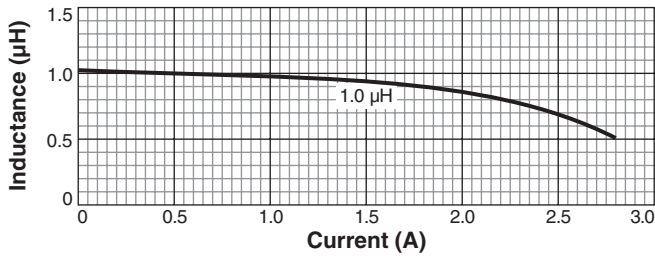
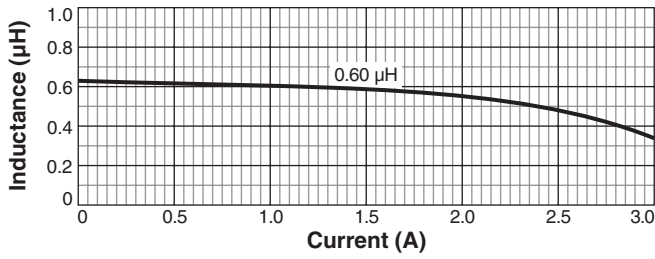
Fax 847-639-1508  
Email cps@coilcraft.com  
www.coilcraft-cps.com

Document ML727-1 Revised 05/22/17

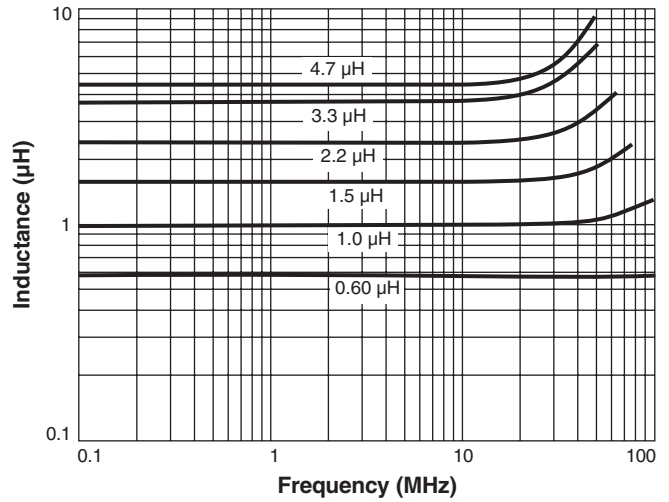
This product may not be used in medical or high risk applications without prior Coilcraft approval. Specifications subject to change without notice. Please check our web site for latest information.

# ML390PZA Series

## L vs Current



## L vs Frequency



CRITICAL PRODUCTS & SERVICES

1102 Silver Lake Road  
Cary, IL 60013  
Phone 800-981-0363

© Coilcraft, Inc. 2017

Fax 847-639-1508  
Email cps@coilcraft.com  
www.coilcraft-cps.com

Document ML727-2 Revised 05/22/17

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