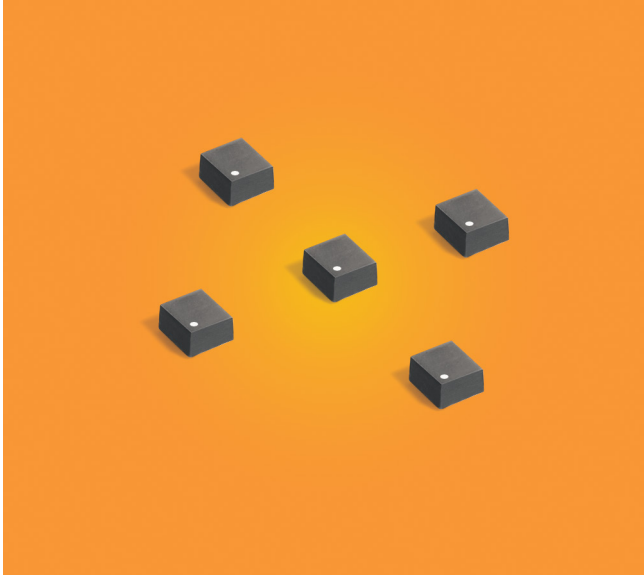


High-Reliability Power Inductors ML338PWA



- High temperature materials allow operation in ambient temperatures up to 155°C
- Very low DCR and excellent current handling.
- Soft saturation makes them ideal for VRM/VRD applications.
- Special construction allows it to pass vibration testing to 30 G and shock testing to 500 G.

Weight 22 mg

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

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.
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, 1.19 mm pocket depth

| Part number ¹ | Inductance ² ±20% (µH) | DCR (Ohms) ³ | | SRF (MHz) ⁴ | | Isat (A) ⁵ | | | Irms (A) ⁶ | |
|--------------------------|--------------------------------------|-------------------------|-------|------------------------|-----|-----------------------|----------|----------|-----------------------|-----------|
| | | nom | max | min | typ | 10% drop | 20% drop | 30% drop | 20°C rise | 40°C rise |
| ML338PWA201MLZ | 0.20 | 0.024 | 0.027 | 286 | 408 | 2.80 | 3.45 | 3.75 | 2.2 | 2.8 |
| ML338PWA331MLZ | 0.33 | 0.031 | 0.035 | 216 | 309 | 1.90 | 2.75 | 3.05 | 1.9 | 2.6 |
| ML338PWA501MLZ | 0.50 | 0.040 | 0.045 | 153 | 218 | 1.80 | 2.35 | 2.64 | 1.7 | 2.3 |
| ML338PWA681MLZ | 0.68 | 0.057 | 0.063 | 106 | 152 | 1.55 | 1.95 | 2.19 | 1.5 | 2.1 |
| ML338PWA821MLZ | 0.82 | 0.068 | 0.075 | 93 | 132 | 1.25 | 1.65 | 1.90 | 1.3 | 1.7 |
| ML338PWA102MLZ | 1.0 | 0.081 | 0.089 | 82 | 117 | 1.20 | 1.60 | 1.80 | 1.1 | 1.6 |
| ML338PWA152MLZ | 1.5 | 0.105 | 0.116 | 56 | 80 | 0.950 | 1.30 | 1.50 | 1.0 | 1.4 |
| ML338PWA222MLZ | 2.2 | 0.156 | 0.173 | 53 | 75 | 0.940 | 1.20 | 1.35 | 0.96 | 1.3 |
| ML338PWA332MLZ | 3.3 | 0.207 | 0.228 | 39 | 55 | 0.700 | 0.925 | 1.05 | 0.79 | 1.1 |
| ML338PWA472MLZ | 4.7 | 0.336 | 0.370 | 28 | 40 | 0.580 | 0.750 | 0.845 | 0.74 | 1.0 |
| ML338PWA682MLZ | 6.8 | 0.421 | 0.463 | 23 | 33 | 0.450 | 0.620 | 0.725 | 0.64 | 0.87 |
| ML338PWA822MLZ | 8.2 | 0.457 | 0.503 | 21 | 30 | 0.440 | 0.600 | 0.670 | 0.55 | 0.75 |
| ML338PWA103MLZ | 10 | 0.555 | 0.611 | 20 | 28 | 0.390 | 0.525 | 0.610 | 0.49 | 0.66 |

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

ML338PWA224MLZ

Testing:

Z = Unscreened

H = Group A screening per Coilcraft CP-SA-10001

All screening performed to the document's latest revision

2. Inductance tested at 100 kHz, 0.1 Vrms, 0 Adc.

3. DCR measured on a micro-ohmmeter.

4. SRF measured using Agilent/HP 4395A or equivalent.

5. DC current at 25°C that causes the specified inductance drop from its value without current.

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.

7. Electrical specifications at 25°C.

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

Coilcraft CPS
CRITICAL PRODUCTS & SERVICES

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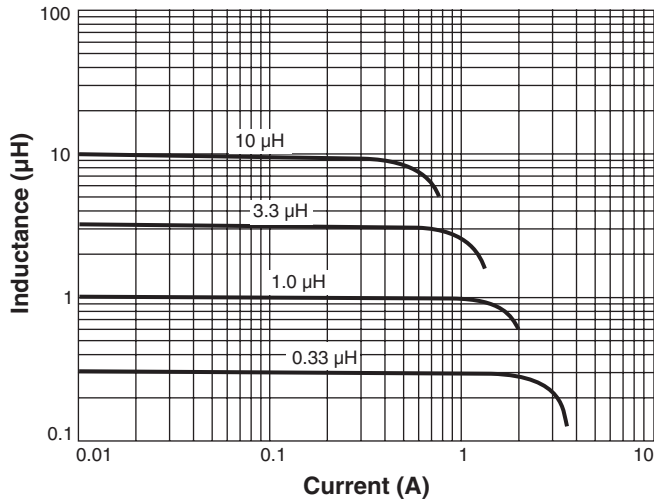
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Document ML646-1 Revised 05/22/17

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.

ML338PWA Series

Typical L vs Current



Typical L vs Frequency

