

High-Reliability Power Inductors ML566PNB



- High current, low DCR shielded power inductors
- High temperature materials allow operation in ambient temperatures up to 155°C

Core material Ferrite

Terminations Matte tin over nickel over phos bronze.

Weight: 2.3 g – 2.5 g

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 200/7" reel

Plastic tape: 24 mm wide, 0.35 mm thick, 16 mm pocket spacing, 4.7mm pocket depth

| Part number ¹ | Inductance ² (µH) | DCR ³ (mOhms) | | SRF (MHz) ⁴ | | Isat (A) ⁵ | | | Irms (A) ⁶ | |
|--------------------------|---------------------------------|-----------------------------|-------|---------------------------|------|-----------------------|-------------|-------------|-----------------------|--------------|
| | | typ | max | min | typ | 10% drop | 20% drop | 30% drop | 20°C rise | 40°C rise |
| ML566PNB102MLZ | 1.0±20% | 5.6 | 6.3 | 70.0 | 100 | 18.14 | 20.64 | 22.24 | 6.00 | 8.00 |
| ML566PNB152MLZ | 1.5±20% | 8.7 | 9.7 | 60.0 | 85.0 | 14.06 | 15.90 | 17.08 | 5.80 | 7.80 |
| ML566PNB272MLZ | 2.7±20% | 10.3 | 11.5 | 49.0 | 70.0 | 11.66 | 13.16 | 14.16 | 5.00 | 6.80 |
| ML566PNB332MLZ | 3.3±20% | 15.1 | 16.8 | 46.0 | 65.0 | 9.74 | 11.08 | 11.98 | 4.50 | 6.30 |
| ML566PNB472MLZ | 4.7±20% | 19.1 | 21.3 | 30.0 | 42.0 | 8.62 | 9.70 | 10.42 | 4.40 | 6.00 |
| ML566PNB562MLZ | 5.6±20% | 22.1 | 24.6 | 26.0 | 37.0 | 7.62 | 8.74 | 9.44 | 3.95 | 5.75 |
| ML566PNB682MLZ | 6.8±20% | 24.9 | 27.7 | 23.0 | 33.0 | 7.38 | 8.36 | 9.00 | 3.70 | 5.20 |
| ML566PNB822MLZ | 8.2±20% | 27.4 | 30.5 | 22.0 | 31.0 | 6.84 | 7.70 | 8.32 | 3.35 | 4.67 |
| ML566PNB103MLZ | 10±20% | 36.8 | 40.9 | 19.0 | 27.0 | 5.88 | 6.66 | 7.18 | 2.85 | 3.90 |
| ML566PNB123MLZ | 12±20% | 38.9 | 43.3 | 17.0 | 24.0 | 5.34 | 6.04 | 6.52 | 2.69 | 3.65 |
| ML566PNB153MLZ | 15±20% | 48.6 | 54.1 | 15.0 | 22.0 | 4.68 | 5.36 | 5.78 | 2.50 | 3.40 |
| ML566PNB183MLZ | 18±20% | 51.0 | 56.7 | 13.0 | 19.0 | 4.32 | 4.92 | 5.32 | 2.41 | 3.19 |
| ML566PNB223MLZ | 22±20% | 60.3 | 67.0 | 12.6 | 18.0 | 3.84 | 4.34 | 4.75 | 2.30 | 3.14 |
| ML566PNB273MLZ | 27±20% | 67.5 | 75.0 | 11.2 | 16.0 | 3.54 | 4.02 | 4.32 | 2.06 | 2.86 |
| ML566PNB333MLZ | 33±20% | 81.7 | 90.8 | 10.5 | 15.0 | 3.24 | 3.66 | 3.96 | 1.90 | 2.60 |
| ML566PNB393MLZ | 39±20% | 95.2 | 105.8 | 9.3 | 13.3 | 3.04 | 3.46 | 3.72 | 1.73 | 2.39 |
| ML566PNB473MLZ | 47±20% | 120.6 | 134.0 | 8.4 | 12.0 | 2.70 | 3.08 | 3.34 | 1.50 | 2.10 |
| ML566PNB563MLZ | 56±20% | 133.8 | 148.7 | 7.4 | 10.6 | 2.46 | 2.80 | 3.02 | 1.44 | 2.01 |
| ML566PNB683MLZ | 68±20% | 167.3 | 185.9 | 6.8 | 9.7 | 2.26 | 2.54 | 2.74 | 1.30 | 1.80 |
| ML566PNB823MLZ | 82±20% | 188.5 | 209.5 | 6.2 | 8.8 | 1.98 | 2.26 | 2.46 | 1.24 | 1.72 |
| ML566PNB104MLZ | 100±20% | 216.8 | 240.9 | 5.6 | 8.0 | 1.84 | 2.08 | 2.24 | 1.19 | 1.65 |
| ML566PNB124KLZ | 120±10% | 287.2 | 319.2 | 5.0 | 7.2 | 1.62 | 1.86 | 2.04 | 1.03 | 1.42 |
| ML566PNB154KLZ | 150±10% | 326.7 | 363.0 | 4.6 | 6.6 | 1.48 | 1.70 | 1.82 | 0.95 | 1.30 |
| ML566PNB184KLZ | 180±10% | 379.5 | 421.7 | 4.1 | 5.9 | 1.36 | 1.56 | 1.68 | 0.89 | 1.21 |
| ML566PNB224KLZ | 220±10% | 488.2 | 542.5 | 3.7 | 5.3 | 1.22 | 1.38 | 1.50 | 0.76 | 1.00 |
| ML566PNB274KLZ | 270±10% | 560.1 | 622.4 | 3.3 | 4.7 | 1.12 | 1.26 | 1.36 | 0.72 | 0.95 |
| ML566PNB334KLZ | 330±10% | 731.4 | 812.7 | 2.9 | 4.1 | 1.00 | 1.10 | 1.20 | 0.65 | 0.87 |
| ML566PNB394KLZ | 390±10% | 813.7 | 904.2 | 2.7 | 3.8 | 0.946 | 1.00 | 1.10 | 0.59 | 0.79 |
| ML566PNB474KLZ | 470±10% | 935.1 | 1039 | 2.5 | 3.5 | 0.864 | 0.978 | 1.00 | 0.56 | 0.76 |
| ML566PNB564KLZ | 560±10% | 1193 | 1326 | 2.1 | 3.0 | 0.776 | 0.884 | 0.956 | 0.50 | 0.67 |
| ML566PNB684KLZ | 680±10% | 1370 | 1523 | 2.0 | 2.8 | 0.720 | 0.818 | 0.882 | 0.46 | 0.62 |
| ML566PNB824KLZ | 820±10% | 1590 | 1767 | 1.8 | 2.6 | 0.634 | 0.728 | 0.792 | 0.43 | 0.58 |
| ML566PNB105KLZ | 1000±10% | 2090 | 2323 | 1.7 | 2.4 | 0.594 | 0.676 | 0.728 | 0.36 | 0.50 |

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

ML566PNB105KLZ

Screening: Z = Unscreened

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

G = Coilcraft CP-SA-10001
Group A (SLDC Option A)

D = Coilcraft CP-SA-10001
Group A (SLDC Option B)

- Screening performed to the document's latest revision.
- Custom testing also available.
- Country of origin restrictions available; prefix option G.

2. Inductance measured at 100 kHz, 0.1 Vrms, 0 Adc using a Coilcraft SMD-A fixture in an Agilent/HP 4263B LCR meter or equivalent.

3. DCR measured on a micro-ohmmeter and a Coilcraft CCF858 test fixture.

4. SRF measured using an Agilent/HP 8753D network analyzer.

5. DC current at which the inductance drops the specified amount from its value without current.

6. Current that causes the specified temperature rise from 25°C ambient.

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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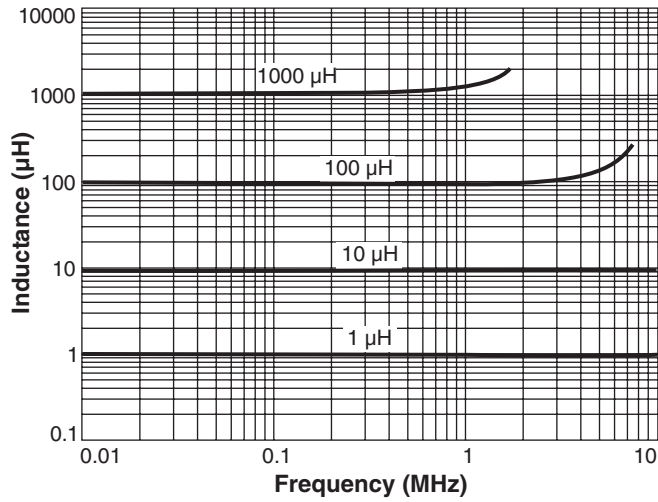
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Document ML540-1 Revised 08/26/20

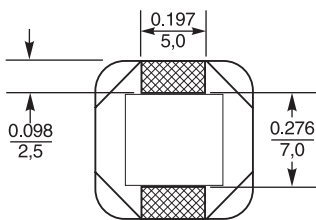
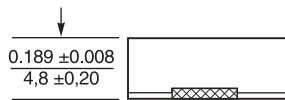
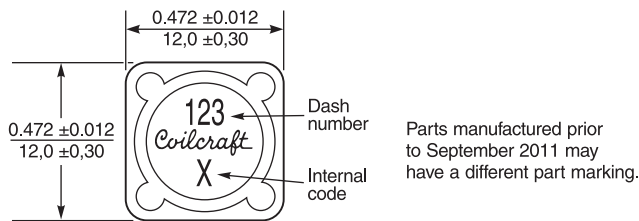
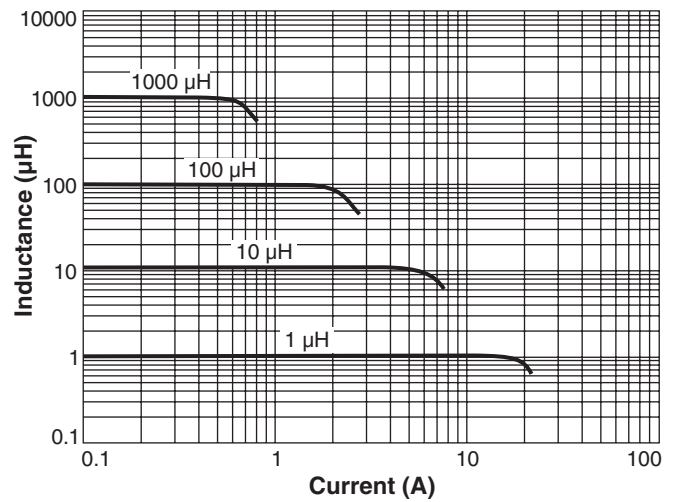
This product may not be used in medical or high risk applications without prior Coilcraft approval. Specifications subject to change without notice. Please check our web site for latest information.

ML566PNB Series

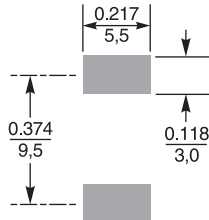
Typical L vs Frequency



Typical L vs Current



Suggested Land Pattern



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



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Document ML540-2 Revised 08/26/20

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