



SMT power inductors

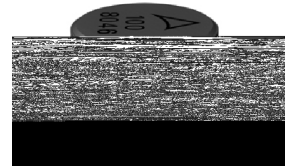
Size 12.95 x 9.40 x 5.08

Series/Type: **B82476B1xxxM100**

Date: **June 2013**

Rated inductance 1 ... 1000 μ H
Construction

- Ferrite core
- Winding: enamel copper wire
- Winding soldered to terminals
- Rugged design with plastic terminal carrier


Features

- Temperature range up to +150 °C
- High rated current
- Low DC resistance
- Suitable for lead-free reflow soldering as referenced in JEDEC J-STD 020D
- Qualified to AEC-Q200
- RoHS-compatible

Applications

- Filtering of supply voltages
- Coupling, decoupling
- DC/DC converters
- Automotive electronics
- Industrial electronics
- Consumer electronics

Terminals

- Base material CuSn6P
- Layer structure Ni, Sn (lead-free)
- Electro-plated

Marking

Marking on component:

Manufacturer, L value (in μ H), date code

Minimum data on reel:

Manufacturer, part number, ordering code,

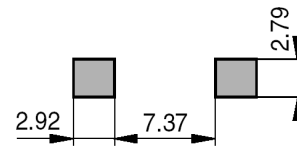
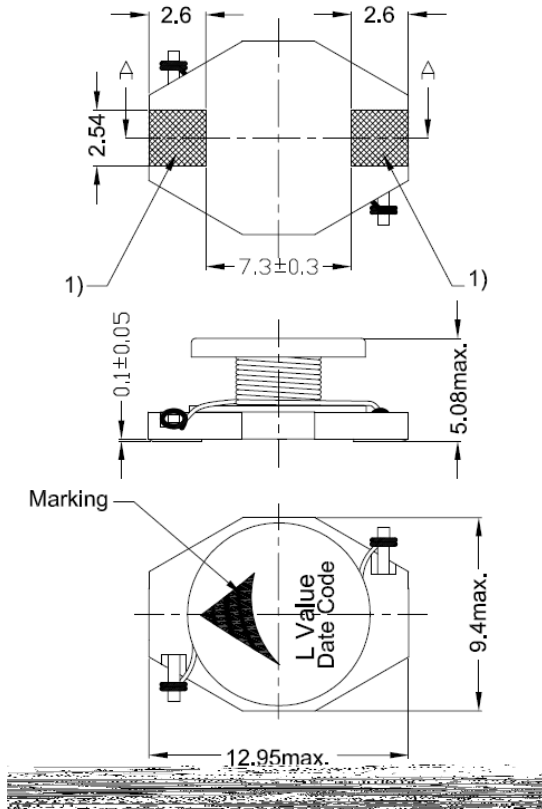
L value and tolerance

quantity, date of packing

Delivery mode and packaging unit

- 24-mm blister tape, reel packing
- Packaging quantity: 750 pcs./reel

Dimensional drawing and layout recommendation



Dimensions in mm
 Component tolerances $\pm 0.2\text{mm}$ unless otherwise noted

Taping and packing

Blister tape



Reel



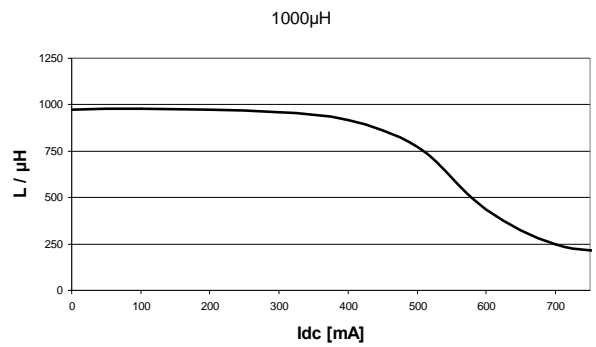
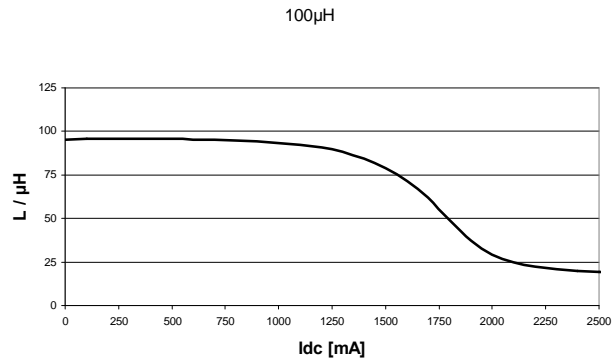
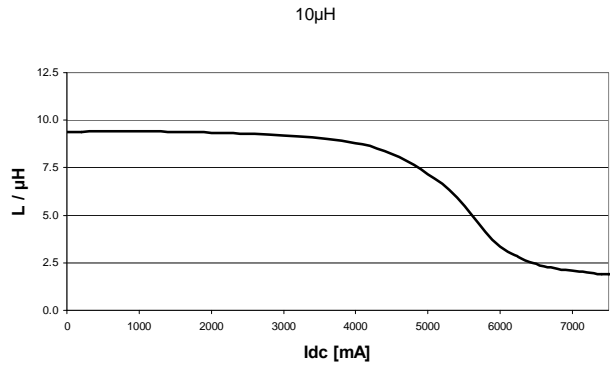
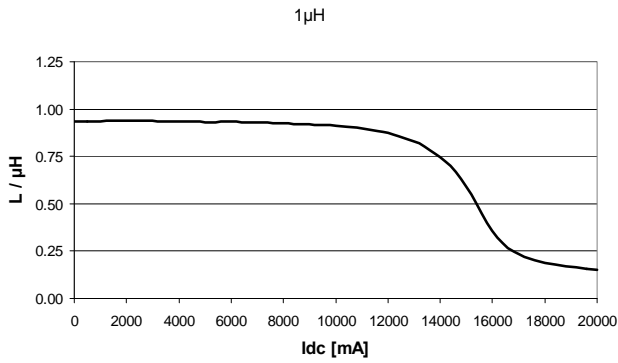
Dimensions in mm

Technical data and measuring conditions

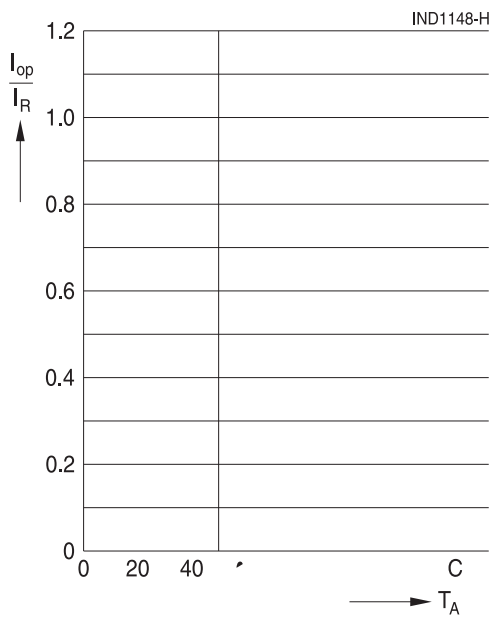
Rated inductance L_R	Measured with LCR meter Agilent 4284A at frequency f_L , 0.1 V
Operating temperature range	-55 °C .. +150 °C
Rated current I_R	Max. permissible DC with temperature increase of ≤ 40 K at +20 °C
Saturation current I_{Sat}	Max. permissible DC with inductance decrease $\Delta L/L_0$ of approx. 10%,
DC resistance R_{typ}	Measured at +20 °C
Solderability (lead-free)	Dip and look method Sn95.5Ag3.8Cu0.7: +(245 ± 5) °C, (3 ± 0.3) s Wetting of soldering area 90% (based on IEC 60068-2-58)
Resistance to soldering heat	+260 °C, 40 s (as referenced in JEDEC J-STD 020D)
Climatic category	55/150/56 (to IEC 60068-1)
Storage conditions	Mounted: -55 °C ... +150 °C Packaged: -25 °C ... +40 °C, $\leq 75\%$ Rrent I

Typical curves:

Inductance vs. DC superposition measured with LCR meter Agilent 4284A at $T_a=20\text{ }^\circ\text{C}$



Current derating versus ambient temperature



Cautions and warnings

- Please note the recommendations in our Inductors data book (latest edition) and in the data sheets.
 - Particular attention should be paid to the derating curves given there.
 - The soldering conditions should also be observed. Temperatures quoted in relation to wave soldering refer to the pin, not the housing.
- If the components are to be washed varnished it is necessary to check whether the washing varnish agent that is used has a negative effect on the wire insulation, any plastics that are used, or on glued joints. In particular, it is possible for washing varnish agent residues to have a negative effect in the long-term on wire insulation.
- The following points must be observed if the components are potted in customer applications:
 - Many potting materials shrink as they harden. They therefore exert a pressure on the plastic housing or core. This pressure can have a deleterious effect on electrical properties, and in extreme cases can damage the core or plastic housing mechanically.
 - It is necessary to check whether the potting material used attacks or destroys the wire insulation, plastics or glue.
 - The effect of the potting material can change the high-frequency behaviour of the components.
- Ferrites are sensitive to direct impact. This can cause the core material to flake, or lead to breakage of the core.
- Even for customer-specific products, conclusive validation of the component in the circuit can only be carried out by the customer.

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The following applies to all products named in this publication:

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