



Inductors

VHF chokes

Series/Type: **B82500**

Date: **March 2008**

Rated voltage 250 V AC/DC
Rated current 0.2 A to 2 A
Rated inductance 120 μ H to 3900 μ H



Construction

- Ferrite cylinder core
- Winding: low-capacitance, multilayer, enamel copper wire
- Polyester insulating sleeve

Features

- High resonance frequency
- High inductance values
- Design complies with EN 60938
- Suitable for wave soldering
- RoHS-compatible

Applications

- RF blocking and filtering
- Interference suppression in small appliances

Terminals

- Central axial leads
- Base material Cu
- Hot-dip tinned with pure tin

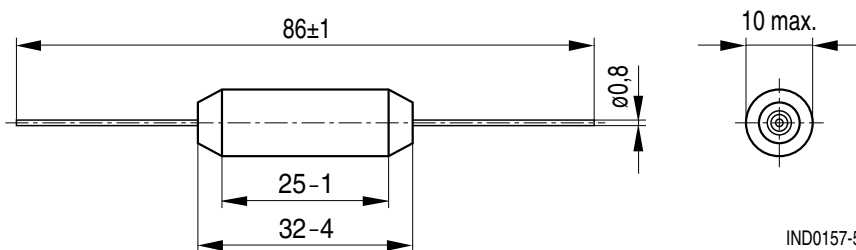
Marking

L_R and I_R in clear text

Delivery mode

Bulk

Dimensional drawing



Dimensions in mm

Technical data and measuring conditions

Test voltage V_{test}	1500 V AC, 2 s
Rated inductance L_R	Measured with LCR meter Agilent 4284A or impedance analyzer Agilent 4294A at 100 kHz, 1 V, 20 °C
Inductance tolerance	±20%
Rated temperature T_R	60 °C
Rated current I_R	Maximum permissible DC current at rated temperature
DC resistance R_{typ}	Measured at 20 °C, tolerance ±20%, typical values
Resonance frequency f_{res}	Measured with Agilent 4294A or 8753ES, 20 °C, tolerance ±30%
Solderability (lead-free)	Sn95.5Ag3.8Cu0.7: (245 ±5) °C, (3 ±0.3) s Wetting of soldering area ≥ 90% (to IEC 60068-2-20, test Ta)
Resistance to soldering heat (wave soldering)	(260 ±5) °C, 10 s (to IEC 60068-2-20, Test Tb)
Tensile strength of leads	≥ 30 N (to IEC 60068-2-21, test Ua)
Climatic category	55/125/56 (to IEC 60068-1)
Storage conditions	Mounted: -55 °C ... +125 °C Packaged: -25 °C ... +40 °C, ≤ 75% RH
Weight	Approx. 7 g

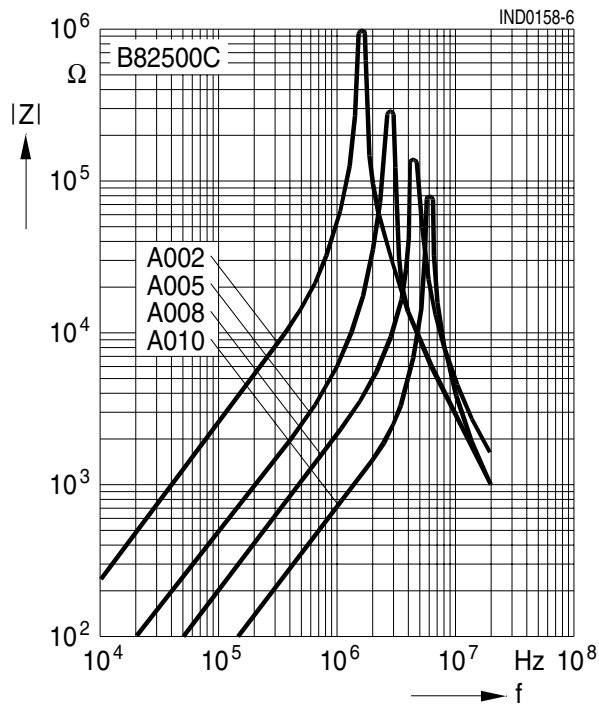
 **Mounting information**

When bending the leads, take care that the bending point is **at least 3 mm** apart from the face ends of the core and that the start-of-winding areas are not subjected to any mechanical stress.

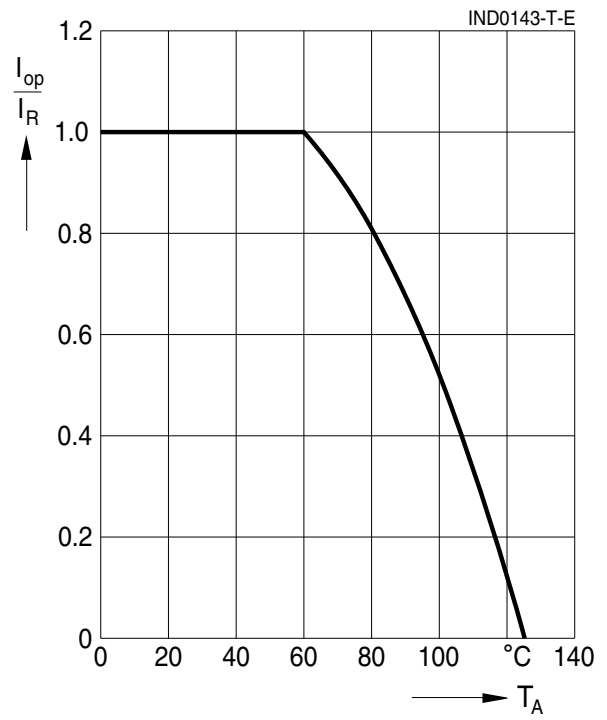
Characteristics and ordering codes

I_R A	L_R μH	R_{typ} Ω	f_{res} MHz	Ordering code
0.2	3900	20	1.8	B82500C0000A002
0.5	820	2.5	3.0	B82500C0000A005
1.0	330	0.6	4.2	B82500C0000A008
2.0	120	0.15	5.8	B82500C0000A010

Impedance $|Z|$ versus frequency f
 measured with impedance analyzer Agilent 4294A or S-parameter network analyzer Agilent 8753ES, typical values at 20 °C



Current derating I_{op}/I_R versus ambient temperature T_A
 (rated temperature $T_R = 60$ °C)



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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