Power line chokes

Current-compensated ring core quad chokes
440/250 V AC, 16 … 75 A, 0.9 … 1.8 mH

Series/Type: **B82765C**

Date: October 2008

Current-compensated ring core quad chokes

Rated voltage 440/250 V AC
Rated current 16 A bis 75 A
Rated inductance 0.9 mH to 1.8 mH

Construction

- Current-compensated ring core quad choke
- Ferrite core
- Aluminum case
- Fixing by means of base plate
- Polyurethane potting (UL 94 V-0)
- Sector winding

Features

- RoHS-compatible

Applications

- Suppression of common-mode interferences
- Switch-mode power supplies for converters, UPS
- Power supplies, medical equipment
- Chargers
- Traction applications

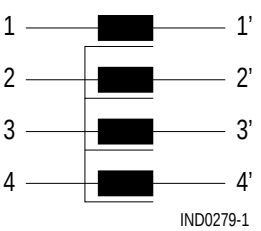
Terminals

- Unidirectional, tinned leads or litz wires

Marking

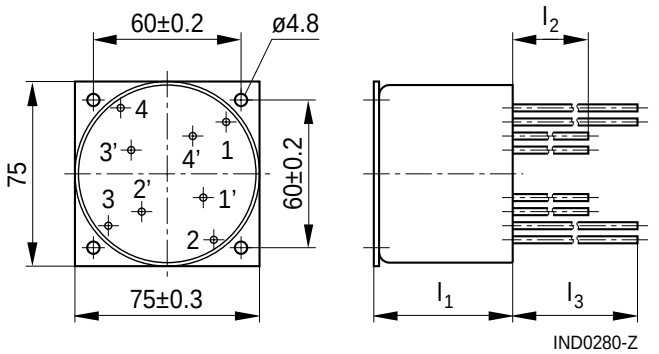
Manufacturer, ordering code, rated current, rated inductance, rated voltage, climatic category, date of manufacture (MM.YY)

Circuit diagram



Dimensional drawings and pin configurations

B82765C*A005, A006

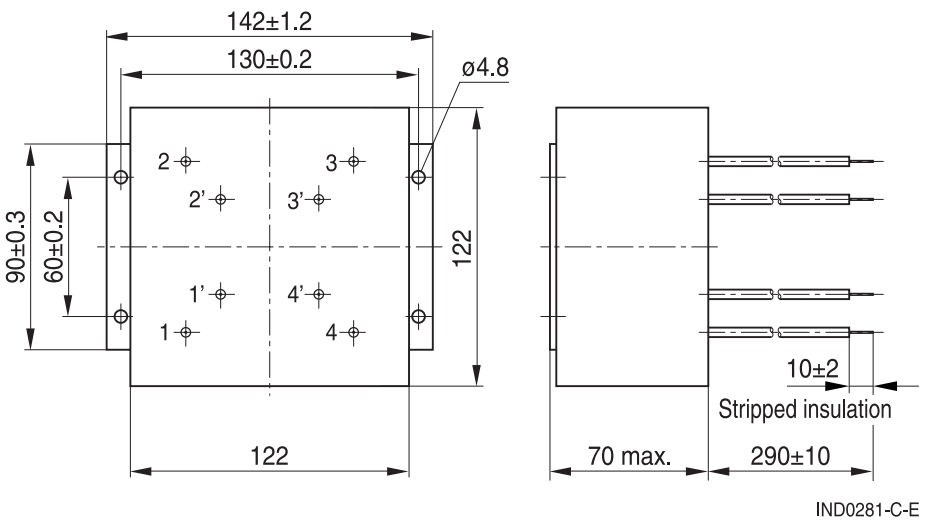


Type	l_1 mm	l_2 mm	l_3 mm
B82765C0001A005	47	160	160
B82765C0002A006	58	110	360

Tolerances to ISO 2768-C unless otherwise noted.

Dimensions in mm

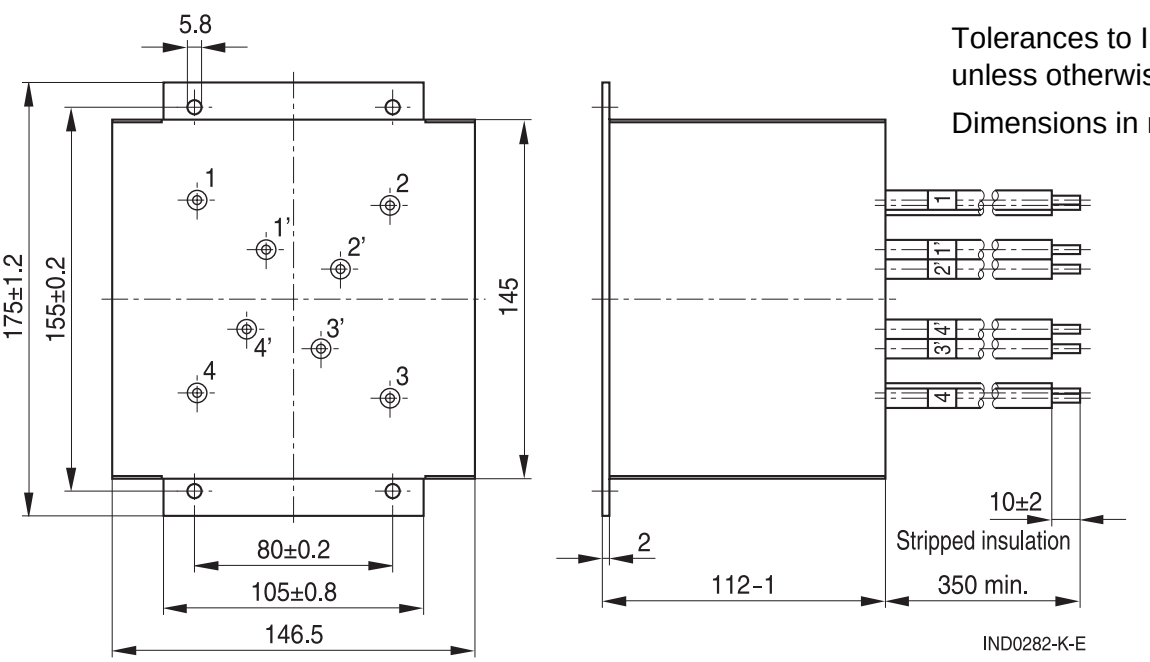
B82765C0005A007



Tolerances to ISO 2768-C unless otherwise noted.

Dimensions in mm

B82765C0006A011



Tolerances to ISO 2768-C unless otherwise noted.

Dimensions in mm

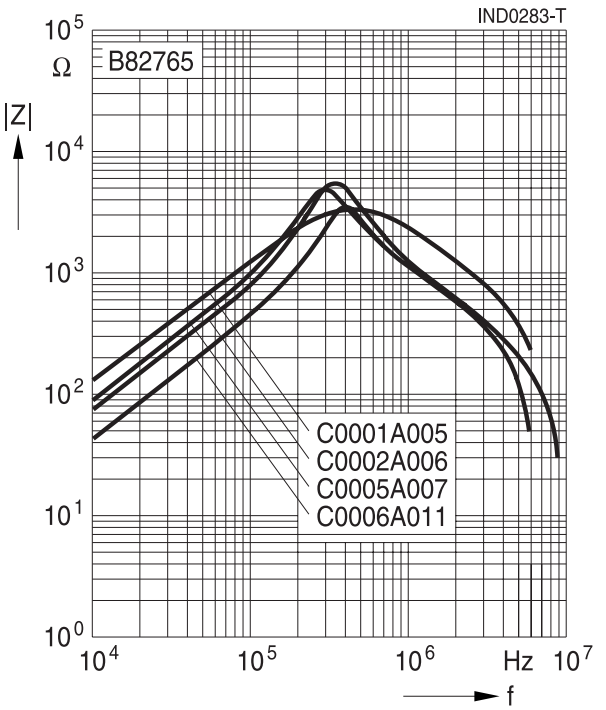
Technical data and measuring conditions

Rated voltage V_R	440/250 V AC (50/60 Hz)
Test voltage V_{test}	2500 V AC, 2 s (line/line) 2500 V AC, 2 s (line/case)
Rated temperature T_R	60 °C
Rated current I_R	Referred to 50 Hz and rated temperature
Rated inductance L_R	Measured with Agilent 4284A at 0.1 mA, 20 °C Measuring frequency: $L_R \leq 1$ mH = 100 kHz $L_R > 1$ mH = 10 kHz Inductance is specified per winding.
Inductance tolerance	±30% at 20 °C
Inductance decrease $\Delta L/L_0$	< 20% at DC magnetic bias with I_R, 20 °C
DC resistance R_{typ}	Measured at 20 °C, typical values
Climatic category	40/125/56 (to IEC 60068-1)
Storage conditions (packaged)	–25 °C … +40 °C, ≤ 75% RH

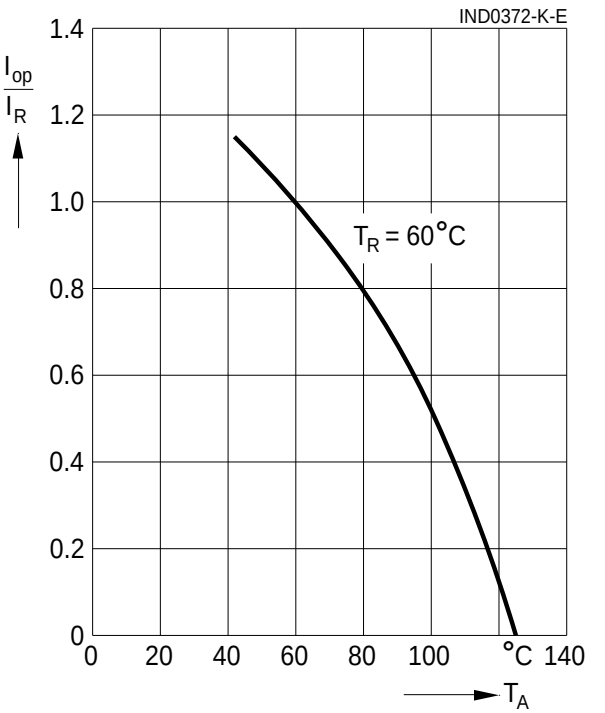
Characteristics and ordering codes

I_R A	L_R mH	R_{typ} mΩ	Weight kg	Terminal	Ordering code
16	1.8	20	0.45	2 × 1.18 mm ∅ CuL	B82765C0001A005
25	1.3	7	0.75	Litz wire 4.2 mm²	B82765C0002A006
50	1.3	3.75	1.7	Litz wire 11.5 mm²	B82765C0005A007
75	0.9	2.5	6.5	Litz wire 16.7 mm²	B82765C0006A011

Impedance |Z| versus frequency f
measured with windings in parallel at 20 °C, typical values



Current derating I_{op}/I_R versus ambient temperature T_A



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.

Important notes

The following applies to all products named in this publication:

1. Some parts of this publication contain **statements about the suitability of our products for certain areas of application**. These statements are based on our knowledge of typical requirements that are often placed on our products in the areas of application concerned. We nevertheless expressly point out **that such statements cannot be regarded as binding statements about the suitability of our products for a particular customer application.**

   As a rule, EPCOS is either unfamiliar with individual customer applications or less familiar with them than the customers themselves. For these reasons, it is always ultimately incumbent on the customer to check and decide whether an EPCOS product with the properties described in the product specification is suitable for use in a particular customer application.

2. We also point out that **in individual cases, a malfunction of electronic components or failure before the end of their usual service life cannot be completely ruled out in the current state of the art, even if they are operated as specified.** In customer applications requiring a very high level of operational safety and especially in customer applications in which the malfunction or failure of an electronic component could endanger human life or health (e.g. in accident prevention or life-saving systems), it must therefore be ensured by means of suitable design of the customer application or other action taken by the customer (e.g. installation of protective circuitry or redundancy) that no injury or damage is sustained by third parties in the event of malfunction or failure of an electronic component.

3. **The warnings, cautions and product-specific notes must be observed**.

4. In order to satisfy certain technical requirements, **some of the products described in this publication may contain substances subject to restrictions in certain jurisdictions (e.g. because they are classed as hazardous)**. Useful information on this will be found in our Material Data Sheets on the Internet (www.epcos.com/material). Should you have any more detailed questions, please contact our sales offices.

5. We constantly strive to improve our products. Consequently, **the products described in this publication may change from time to time**. The same is true of the corresponding product specifications. Please check therefore to what extent product descriptions and specifications contained in this publication are still applicable before or when you place an order.

   We also **reserve the right to discontinue production and delivery of products**. Consequently, we cannot guarantee that all products named in this publication will always be available.

   The aforementioned does not apply in the case of individual agreements deviating from the foregoing for customer-specific products.

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