

Power line chokes

Current-compensated ring core triple chokes

600 / 350 V AC, 0.57 ... 2.2 mH, 16 ... 35 A / +70 °C

Series/Type: **B82747E6**

Date: May 2015

Current-compensated ring core triple chokes

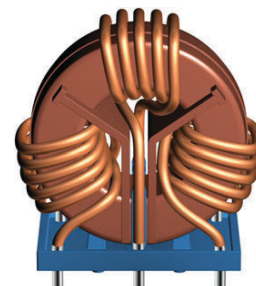
Rated voltage 600 / 350 V AC

Rated inductance 0.57 ... 2.2 mH

Rated current 16 ... 35 A / +70 °C

Construction

- Current-compensated ring core double choke
- Ferrite core
- Plastic core case incl. spacer (UL 94 V-0, CTI600)
- Plastic base plate (UL 94 V-0)
- Sector winding
- Clearance distance ≥ 5.5 mm, creepage distance ≥ 6.3 mm



Features

- Insulation for high voltage applications
- Approx. 0.6% stray inductance for symmetrical interference suppression
- High rated current and rated temperature
- Suitable for wave soldering
- Design complies with EN 60938-2 (VDE 0565-2)
- UL 1446 class 155 (F) electrical insulation system 
- Recyclable owing to omission of adhesives
- RoHS-compatible

Applications

- Suppression of common-mode interferences
- High-voltage switch-mode power applications
- Solar power inverters
- Frequency converters

Terminals

- Ends of winding wires
- Hot-dip tinned

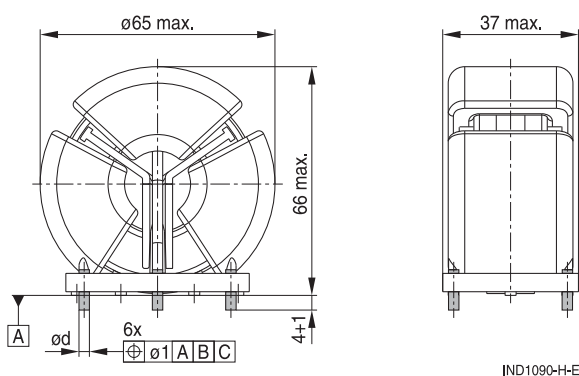
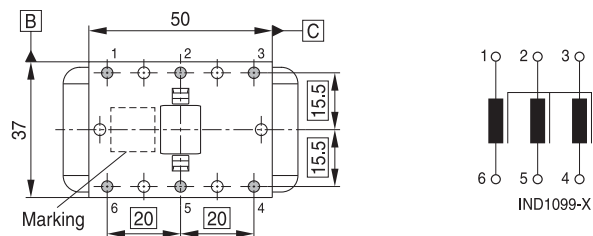
Marking

Product brand, electrical insulation system designation, ordering code, rated voltages, rated inductance, rated current, date of manufacture (YYWWD.internal ID code), production place identification code

Delivery mode

- Cardboard box

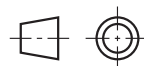
Dimensional drawings and pin configurations



Tolerances to ISO 2768-cl / ISO 8015.

Size ISO 14405 $\text{\textcircled{E}}$

All dimensions in mm



IND1245-O-E

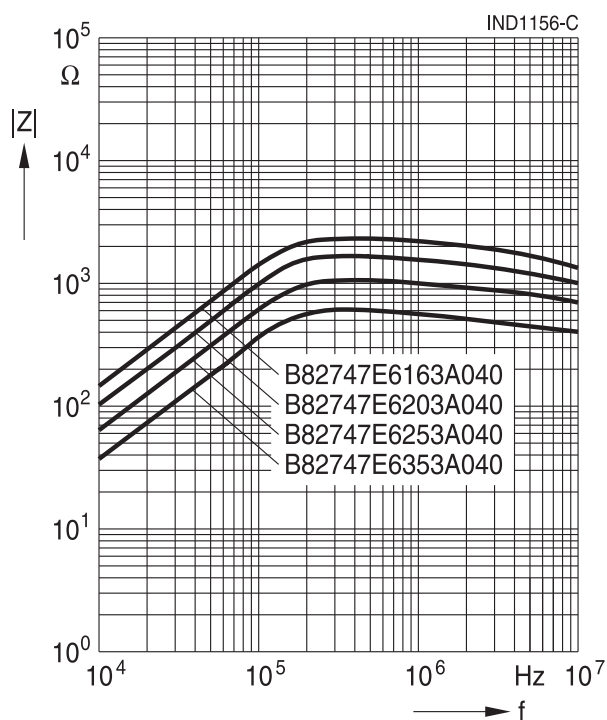
Power line chokes
B82747E6
Current-compensated ring core triple chokes
Technical data and measuring conditions

Rated voltage V_R	600 / 350 V AC (50 / 60 Hz)
Test voltage V_{test}	2600 V DC, 2 s (line/line)
Rated temperature T_R	+70 °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: $f_{meas} = 100$ kHz $L_R > 1$ mH: $f_{meas} = 10$ kHz Inductance is specified per winding.
Inductance tolerance	−30/+50% at +20 °C
Inductance decrease $\Delta L/L_0$	< 10% at DC magnetic bias with I_R , +20 °C
Stray inductance $L_{stray,typ}$	Measured with Agilent 4284A at 5 mA, +20 °C, typical values Measuring frequency: $L_R \leq 1$ mH: $f_{meas} = 100$ kHz $L_R > 1$ mH: $f_{meas} = 10$ kHz
DC resistance R_{typ}	Measured at +20 °C, typical values, specified per winding
Solderability (lead-free)	Sn96.5Ag3.0Cu0.5: +(245 ± 5) °C, (3 ± 0.3) s Wetting of soldering area ≥ 95% (to IEC 60068-2-20, test Ta)
Resistance to soldering heat (wave soldering)	+(260 ± 5) °C, (10 ± 1) s (to IEC 60068-2-20, test Tb)
Climatic category	40/125/56 (to IEC 60068-1)
Storage conditions (packaged)	−25 °C ... +40 °C, ≤ 75% RH
Weight	205 ... 225 g

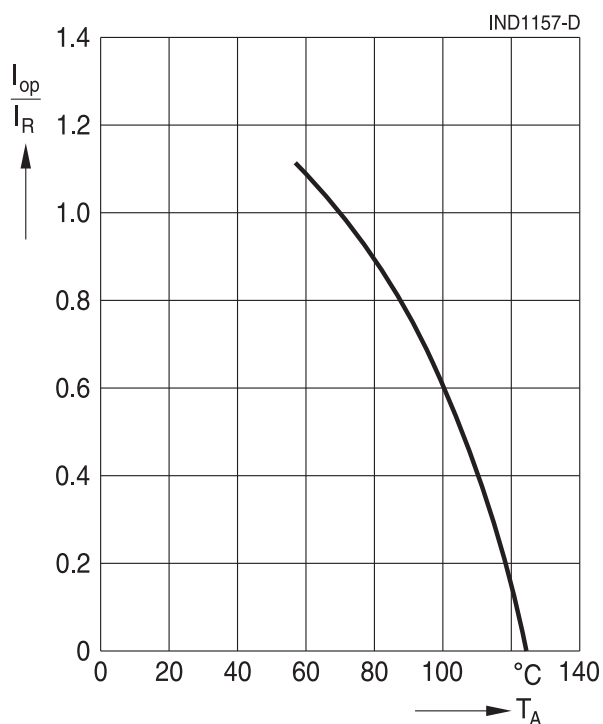
Characteristics and ordering codes

$I_{R,+70\text{ °C}}$ A	L_R mH	$L_{stray,typ}$ μH	R_{typ} mΩ	Wire Ø d ±0.1 mm	Ordering code
16	2.2	11.5	6.0	1.8	B82747E6163A040
20	1.5	9.0	4.2	2.0	B82747E6203A040
25	1.0	5.5	2.8	2.24	B82747E6253A040
35	0.57	3.0	1.4	2.8	B82747E6353A040

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
rated temperature $T_R = +70$ °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.

Washing processes may damage the product due to the possible static or cyclic mechanical loads (e.g. ultrasonic cleaning). They may cause cracks to develop on the product and its parts, which might lead to reduced reliability or lifetime.
- 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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