



## Power line chokes

Current-compensated ring core triple chokes  
600 / 350 V AC, 0.57 ... 2.2 mH, 16 ... 35 A / +70 °C

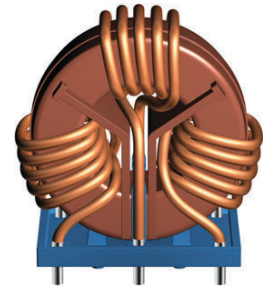
Series/Type: B82747E6  
Date: August 2014


**Current-compensated ring core triple chokes**
**Preliminary data**

**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  $\geq 5.5$  mm, creepage distance  $\geq 6.3$  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**

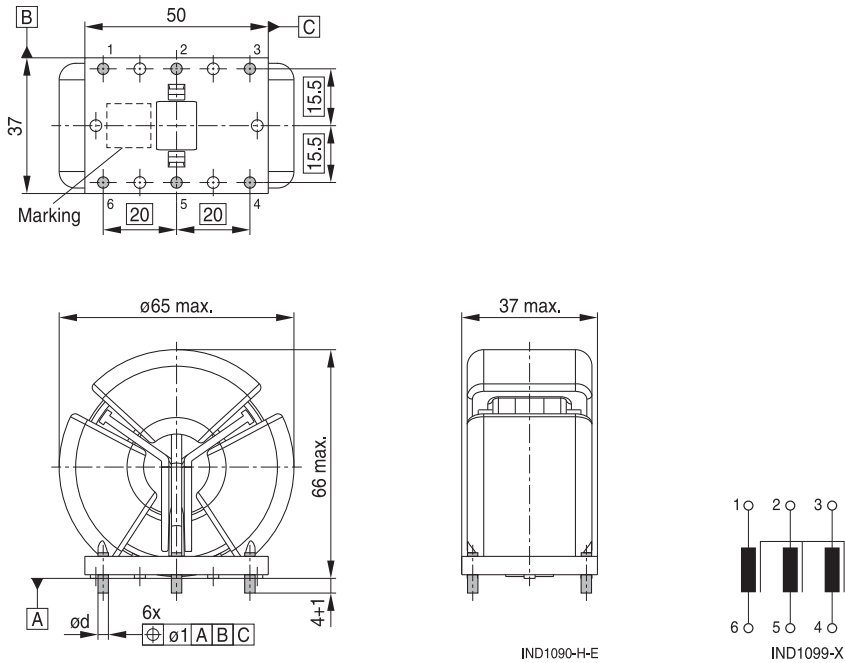
Manufacturer, electrical insulation system designation, ordering code, rated voltages, rated inductance, rated current, date of manufacture (YYWWD.internal ID code), factory identification code



**Delivery mode**

- Cardboard box

**Preliminary data**

**Dimensional drawings and pin configurations**



Dimensions in mm, Tolerances to ISO 2768-cL unless otherwise noted  

**Current-compensated ring core triple chokes**
**Preliminary data**
**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 $I_R$	16 ... 35 A Referred to 50 Hz and rated temperature
Rated inductance $L_R$	0.57 ... 2.2 mH 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

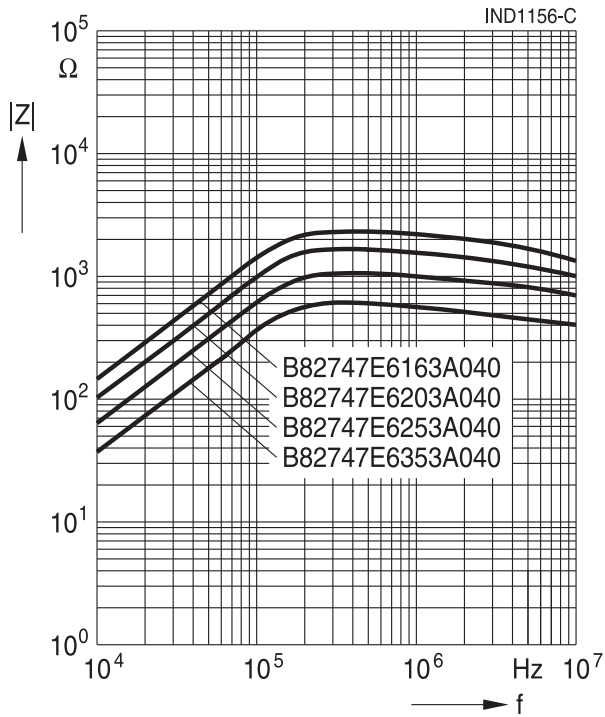
**Characteristics and ordering codes**

$I_{R,+70\text{ °C}}$ A	$L_R$ mH	$L_{stray,typ}$ μH	$R_{typ}$ mΩ	Wire Ø d ±0.1	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

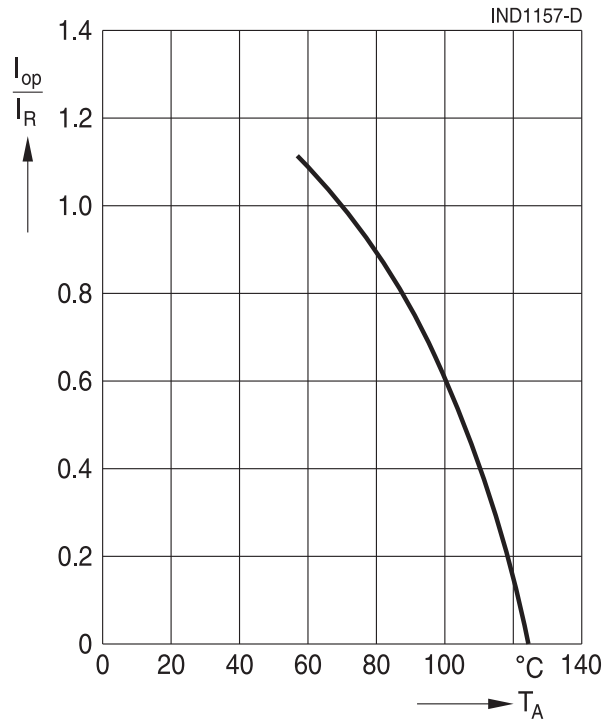
**Current-compensated ring core triple chokes**

**Preliminary data**

**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. Derating must be applied in case the ambient temperature in the application exceeds the rated temperature of the component.
  - Ensure the operation temperature (which is the sum of the ambient temperature and the temperature rise caused by losses / self-heating) of the component in the application does not exceed the maximum value specified in the climatic category.
  - 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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