



## Power line chokes

Current-compensated ring core triple chokes  
440/250 V AC, 18 A, 1.8 mH

**Series/Type:** B82747S4183N021

**Date:** October 2008, March 2009

Current-compensated ring core triple chokes

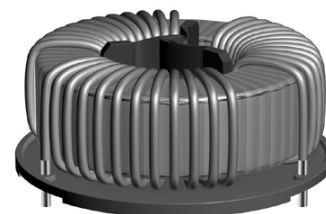
Rated voltage 440/250 V AC

Rated current 18 A

Rated inductance 1.8 mH

**Construction**

- Current-compensated ring core triple choke
- Ferrite core
- Polycarbonate base plate (UL 94 V-0)
- Polyamide spacer (UL 94 V-0)
- Choke fixed with PU compound (UL 94 V-0)
- Sector winding
- Clearance  $\geq 3$  mm, creepage distance  $\geq 4$  mm



**Features**

- Approx. 1% stray inductance for symmetrical interference suppression
- Suitable for wave soldering
- Design complies with EN 60938-2 (VDE 0565-2)
- RoHS-compatible

**Applications**

- Suppression of common-mode interferences
- Switch-mode applications

**Terminals**

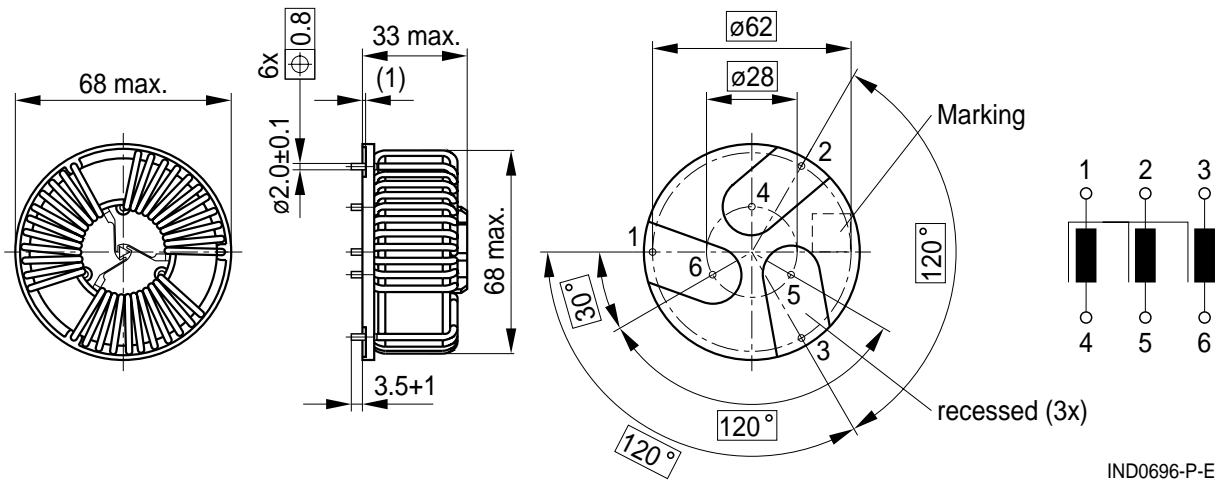
- Ends of winding wires
- Hot-dip tinned

**Marking**

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

**Delivery mode**

Cardboard box

**Dimensional drawing and pin configuration**


Dimensions in mm

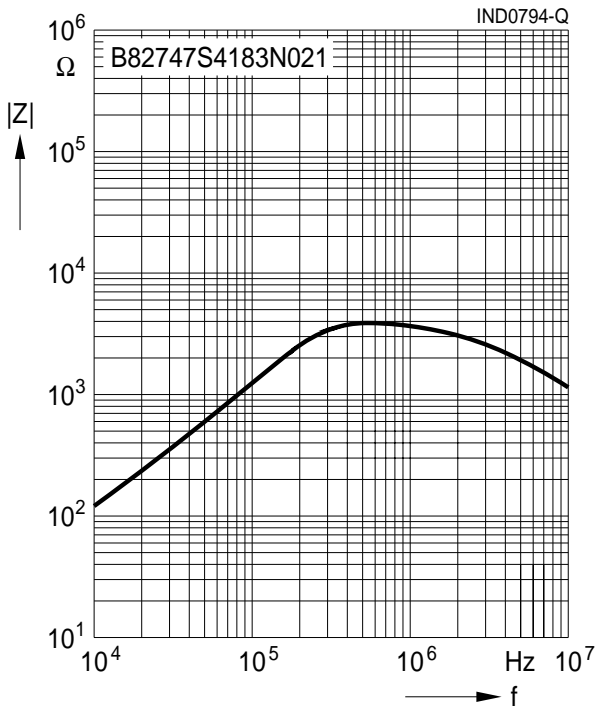
**Technical data and measuring conditions**

Rated voltage $V_R$	440/250 V AC (50/60 Hz)
Test voltage $V_{test}$	2000 V AC / 2800 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 10 kHz, 0.1 mA, 20 °C Inductance is specified per winding.
Inductance tolerance	±30% 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 10 kHz, 5 mA, 20 °C, typical value
DC resistance $R_{typ}$	Measured at 20 °C, typical value, 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	Approx. 250 g

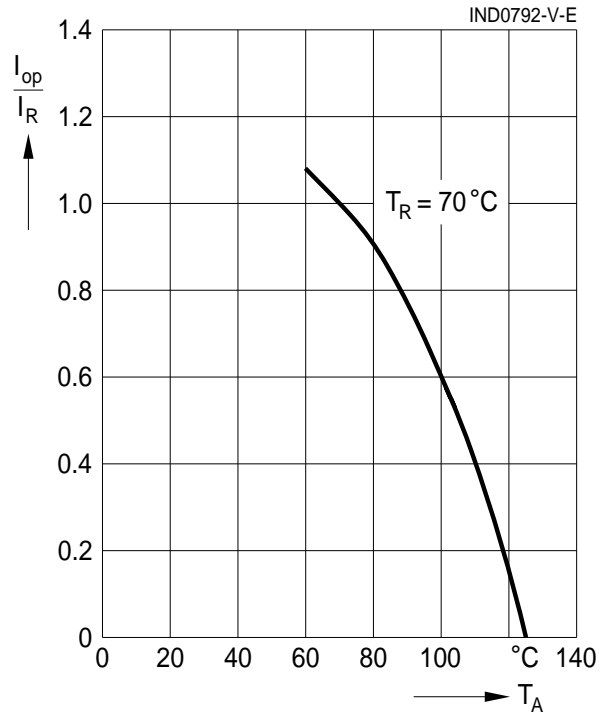
**Characteristics and ordering code**

$I_R$ A	$L_R$ mH	$L_{stray,typ}$ $\mu$ H	$R_{typ}$ m $\Omega$	Ordering code
18	1.8	17	4.7	B82747S4183N021

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



**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.

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