



Power line chokes

Current-compensated ring core triple chokes
500 / 300 V AC, 35 / 30 A, 0.82 / 0.85 mH, +70 °C

Series/Type: **B82747S4**3A04***

Date: August 2014

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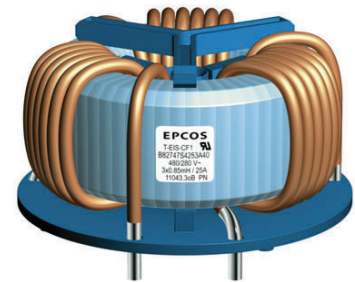
EPCOS AG is a TDK Group Company.


Current-compensated ring core triple chokes
Preliminary data

Rated voltage 500 / 300 V AC
Rated inductance 0.82 / 0.85 mH
Rated current 35 / 30 A (+70 °C)

Construction

- Current-compensated ring core triple choke
- Ferrite core with epoxy coating (UL 94-V0)
- Additional PET core insulation
- Plastic base plate and holder (UL 94-V0)
- Sector winding


Features

- High resonance frequency
- Approx. 0.5 ... 0.65% 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 
- No adhesives used
- RoHS-compatible

Applications

- Suppression of common-mode interferences
- Switch-mode power applications
- Power inverters
- Frequency converters

Terminals

- Ends of winding wires
- Hot-dip tinned

Marking

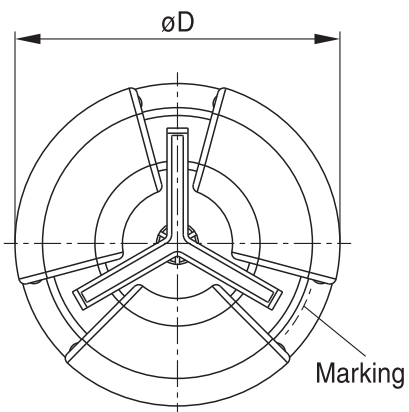
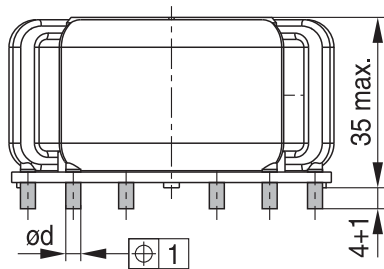
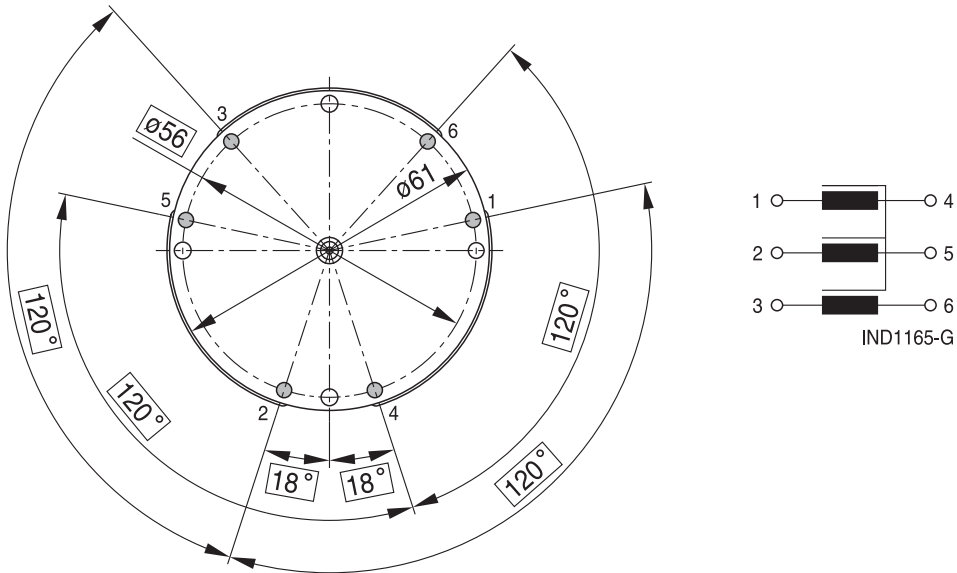
Manufacturer, electrical insulation system designation, ordering code,
 rated voltages, rated inductance, rated current,
 date of manufacture (YYWWD.internal ID code), factory identification code

Delivery mode

- Blister tray in a cardboard box

Preliminary data

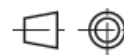
Dimensional drawing and layout recommendation



Ordering code	ϕD max. mm
B82747S4253A040	62
B82747S4303A041	64

IND1091-M-E

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



Current-compensated frame core triple chokes
Preliminary data
Technical data and measuring conditions

Rated voltage V_R	500 / 300 V AC (50/60 Hz)
Test voltage V_{test}	1500 V AC, 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	+35% 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 values
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	220, 230 g
Approvals	UL1446 Class 155 (F) (E320370)

Characteristics and ordering codes

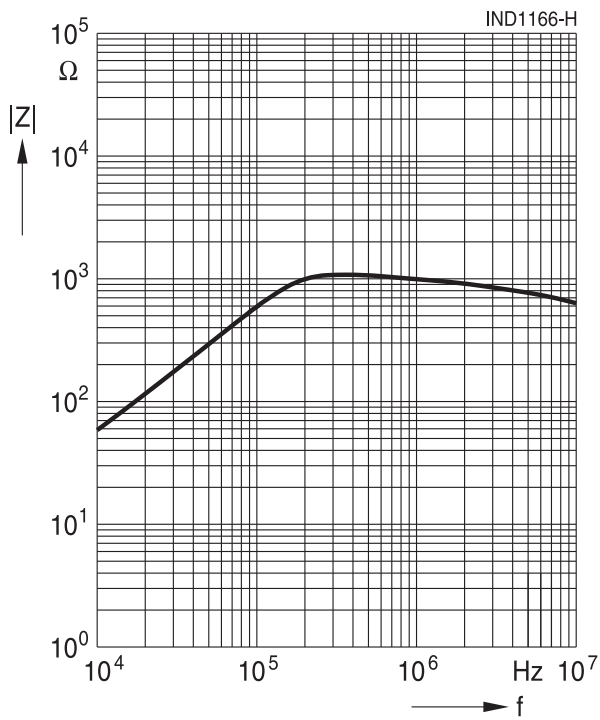
I_R A	L_R mH	$L_{stray,typ}$ μH	R_{typ} mΩ	Wire Ø d ±0.1	Ordering code
30	0.85	5.5	1.9	2.5	B82747S4253A040 ¹⁾
35	0.82	4.0	1.4	2.8	B82747S4303A041 ²⁾

1) Alternative rating: 25 A at +85 °C

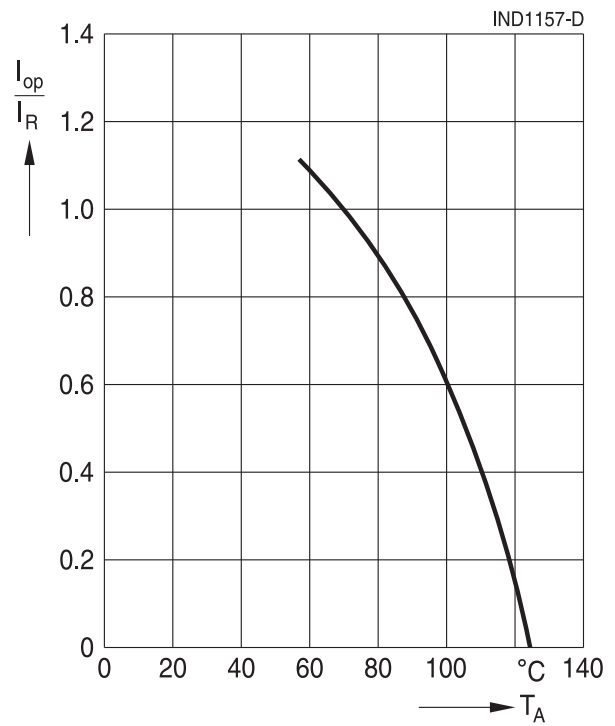
2) Alternative rating: 30 A at +85 °C

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



Cautions and warnings

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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