



## Power line chokes

Current-compensated frame core double chokes  
250 V AC, 0.7 ... 2.3 A, 10 ... 100 mH

**Series/Type:** B82733F

**Date:** October 2008

Current-compensated frame core double chokes


Rated voltage 250 V AC  
Rated current 0.7 A to 2.3 A  
Rated inductance 10 mH to 100 mH



Construction

- Current-compensated double choke
- Closed magnetic circuit with frame construction
- 4-section winding with direct winding of the core
- Optional magnetic bypass to increase stray inductance
- Height 14 mm
- Clearance and creepage distances >3 mm

Features

- High inductance with low resistance
- Excellent differential-mode suppression
- High pulse-handling capability
- Industry best inductance/rated current ratio
- Suitable for wave soldering
- Design complies with EN 60938-2 (VDE 0565-2)
- VDE and UL approval 
- RoHS-compatible

Applications

- Electronic ballasts for lamps
- High power switch-mode power supplies for consumer electronics

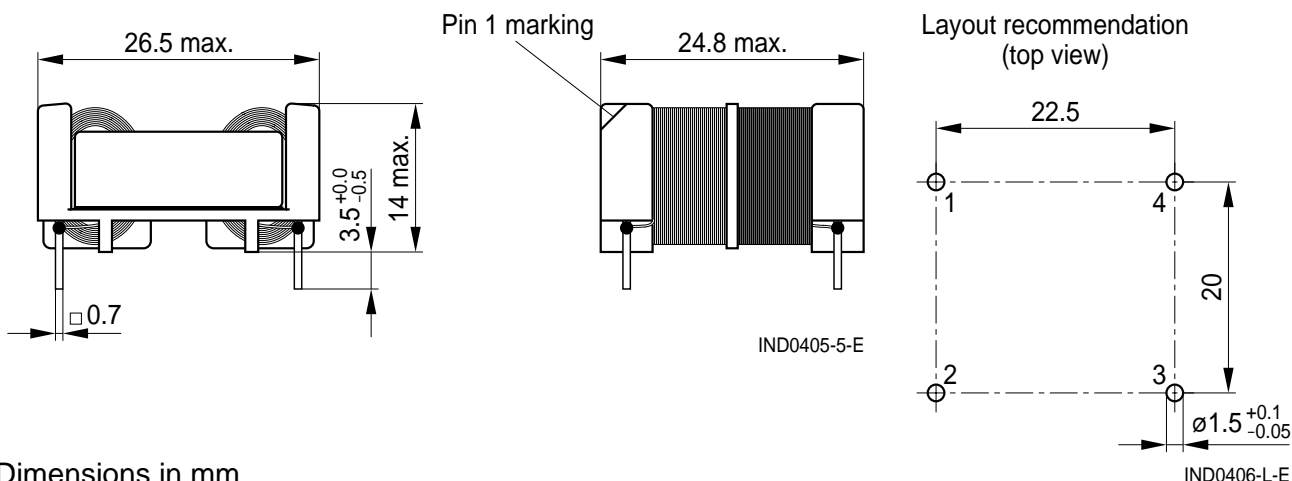
Terminals

- Lead-free
- Pins 0.7 × 0.7 (mm)
- Pins in the lead spacing 20 × 22.5 mm

Marking

Marking

Manufacturer, date of manufacture (YYWW), production place, rated inductance, rated current, ordering code, pin 1 marking



**Dimensional drawing and layout recommendation**


Dimensions in mm

**Technical data and measuring conditions**

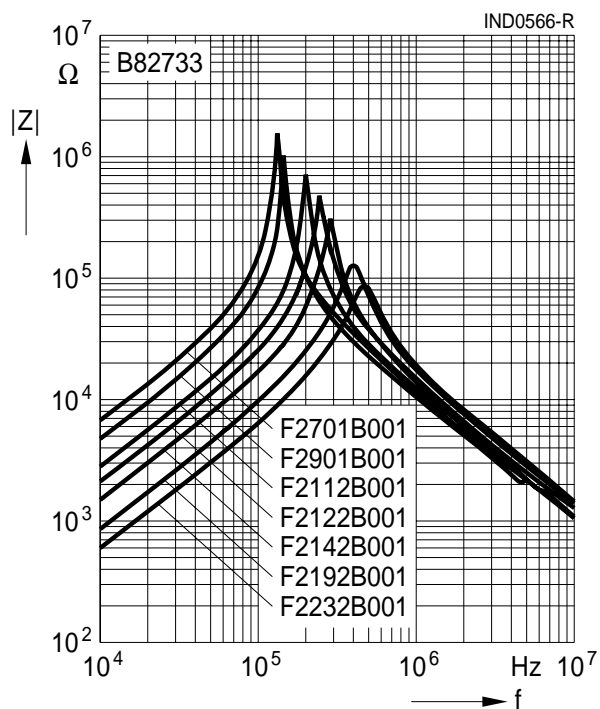
Rated voltage $V_R$	250 V AC (50/60 Hz)
Test voltage $V_{test}$	1500 V AC, 2 s (line/line)
Rated temperature $T_R$	40 °C
Rated current $I_R$	Referred to 50 Hz and rated temperature
Rated inductance $L_R$	Measured with Agilent 4284A at 10 kHz, 0.1 mA, 20 °C Inductance is specified per winding.
Inductance tolerance	-30/+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 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	Approx. 18 g
Approvals	EN 60938-2, UL 1283

**Characteristics and ordering codes**

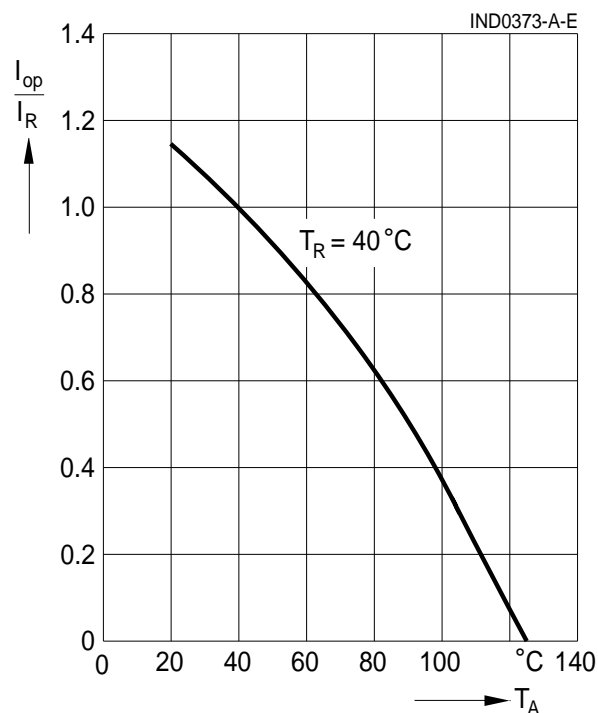
$I_R$ A	$L_R$ mH	$L_{\text{stray,typ}}$ $\mu\text{H}$	$R_{\text{typ}}$ $\text{m}\Omega$	Ordering code	Approvals	
						
0.7	100	2100	1810	B82733F2701B001	×	×
0.9	68	1440	1100	B82733F2901B001	×	×
1.1	47	970	804	B82733F2112B001	×	×
1.2	39	800	696	B82733F2122B001	×	×
1.4	27	530	440	B82733F2142B001	×	×
1.9	15	310	279	B82733F2192B001	×	×
2.3	10	200	188	B82733F2232B001	×	×

× = approval granted

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



**Current derating  $I_{\text{op}}/I_R$**   
**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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