



## Power line chokes

Current-compensated frame core double chokes  
250 V AC, 0.7 ... 2.3 A, 10 ... 100 mH, +40 °C

**Series/Type:** B82733F

**Date:** March 2012

**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 frame core double choke
- Closed magnetic circuit with frame construction made of ferrite
- PET coil former (UL94 V-0)
- 4-section winding with direct winding on the core
- Sector winding
- Clearance and creepage distances >3 mm



**Features**

- High inductance with low resistance
  - Approx. 2% stray inductance for symmetrical interference suppression
  - High pulse-handling capability
  - Very good inductance/rated current ratio
  - Low height (14 mm)
  - Suitable for wave soldering
  - Design complies with EN 60938-2 (VDE 0565-2) and UL 1283
  - ENEC (VDE) and UL<sup>1</sup> approval 
  - RoHS-compatible
- <sup>1</sup> UL approval with 300 V AC

**Applications**

- Suppression of common-mode and differential-mode interferences
- Electronic ballasts for lamps
- High power switch-mode power supplies for consumer electronics

**Terminals**

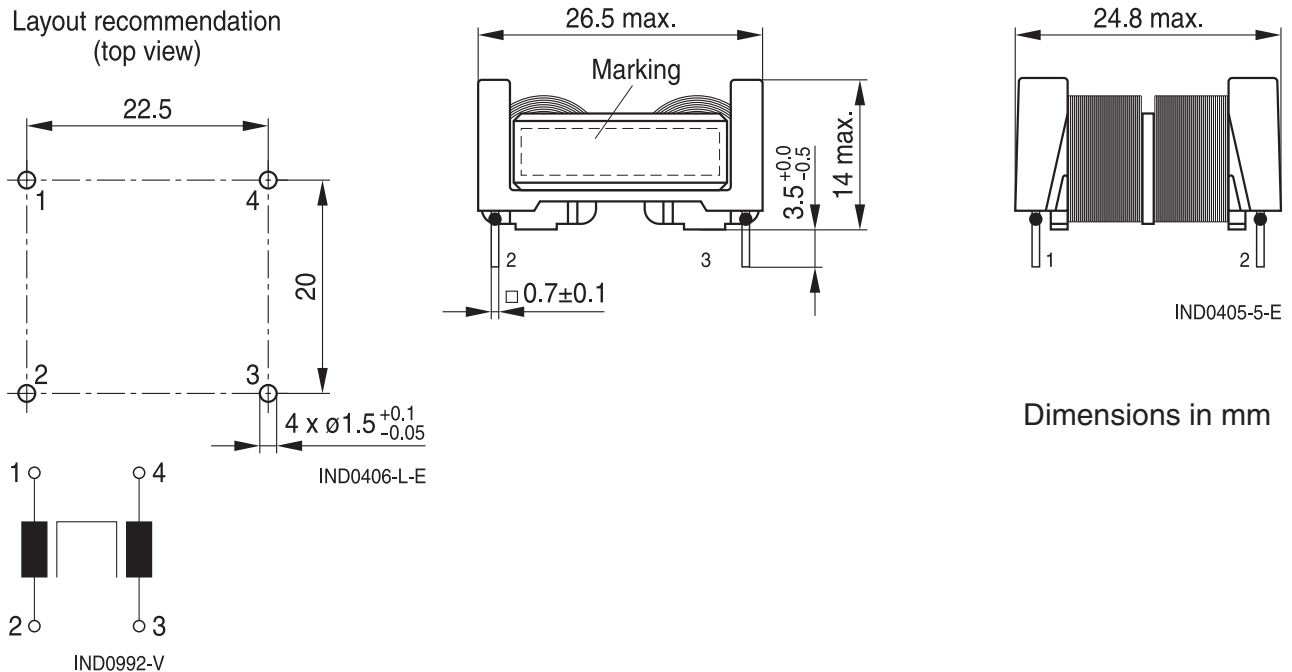
- Base material CP wire
- Hot dipped
- Pins 0.7 × 0.7 mm
- Lead spacing 20 × 22.5 mm

**Marking**

Manufacturer, date of manufacture (YYWW), factory identification code, ordering code, approval signs



**Delivery mode**

Polystyrene tray, anti-static, in cardboard box

**Dimensional drawing and layout recommendation**

**Technical data and measuring conditions**

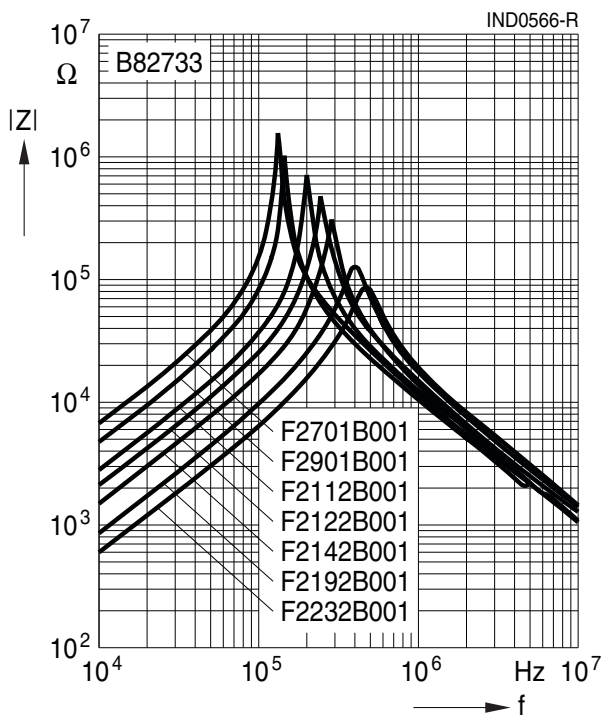
Rated voltage $V_R$	250 V AC (50/60 Hz)
Test voltage $V_{test}$	1500 V AC, 2 s (line/line)
Rated temperature $T_R$	+40 °C
Rated current $I_R$	Referred to 50 Hz and rated temperature
Rated inductance $L_R$	Measured with Agilent 4284A at 10 kHz, 0.1 mA, +20 °C. Inductance is specified per winding.
Inductance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

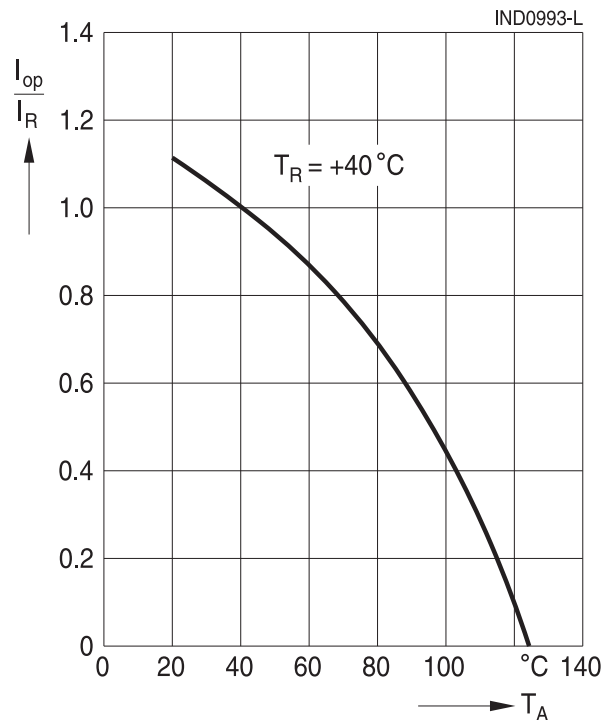
$I_R$ A	$L_R$ mH	$L_{stray,typ}$ $\mu$ H	$R_{typ}$ m $\Omega$	Ordering code	Approvals	
						
0.7	100	2100	1810	B82733F2701B001	×	×
0.9	68	1440	1100	B82733F2901B001	×	×
1.1	47	970	804	B82733F2112B001	×	×
1.2	39	800	696	B82733F2122B001	×	×
1.4	27	530	440	B82733F2142B001	×	×
1.9	15	310	279	B82733F2192B001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