



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 2011

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 UL¹ approval 
- RoHS-compatible

¹ 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
- Layer composition Ni, Sn
- Hot dipped
- Pins 0.7 × 0.7 mm
- Lead spacing 20 × 22.5 mm

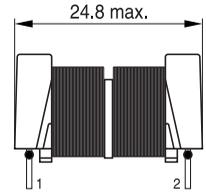
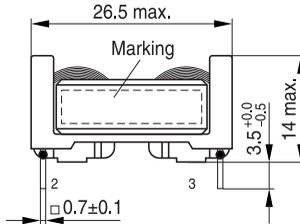
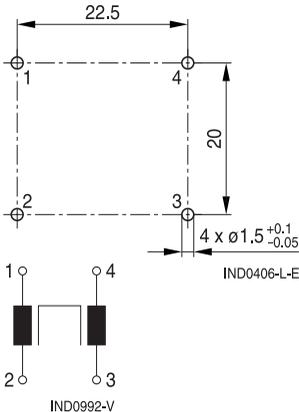
Marking

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

 Layout recommendation
(top view)


IND0405-5-E

Dimensions in mm

Technical data and measuring conditions

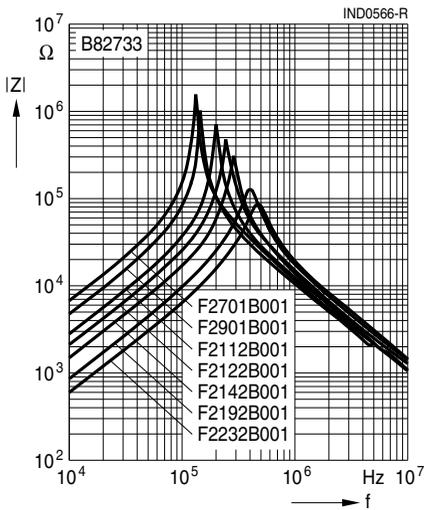
| | |
|---|---|
| Rated voltage V_R | 250 V AC (50/60 Hz) |
| Test voltage V_{test} | 1500 V AC, 2 s (line/line) |
| Rated temperature T_R | +40 °C |
| Rated current I_R | Referred to 50 Hz and rated temperature |
| Rated inductance L_R | Measured with Agilent 4284A at 10 kHz, 0.1 mA, +20 °C. Inductance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

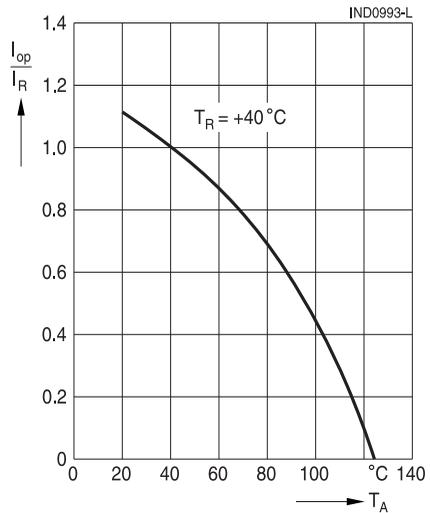
| I_R A | L_R mH | $L_{\text{stray,typ}}$ μH | R_{typ} $\text{m}\Omega$ | Ordering code | Approvals | |
|------------|-------------|---|--------------------------------------|-----------------|---|---|
| | | | | |  |  |
| 0.7 | 100 | 2100 | 1810 | B82733F2701B001 | × | × |
| 0.9 | 68 | 1440 | 1100 | 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_{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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