



Power line chokes

Current-compensated D core double chokes
250 V AC, 0.35 ... 1.8 A, 3.3 ... 100 mH

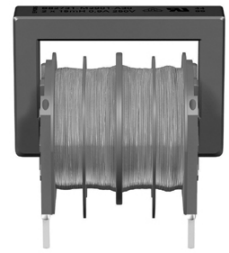
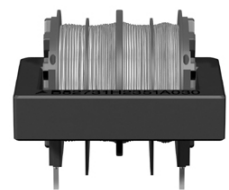
Series/Type: B82731M/H

Date: March 2008


Rated voltage 250 V AC
Rated current 0.35 A to 1.8 A
Rated inductance 3.3 mH to 100 mH

Construction

- Current-compensated double choke
- Closed rectangular ferrite core
- Closed polycarbonate coil former (UL 94 V-0)
- Without encapsulation
- 2-section winding
- Clearance and creepage distances > 3 mm


B82731M

B82731H

Features

- High resonance frequency due to 2-section winding
- Approx. 1% stray inductance for symmetrical interference suppression
- Low leakage due to closed core shape
- High pulse strength
- Low whirring noise
- Suitable for wave soldering
- Design complies with EN 60938-2 (VDE 0565-2)
- UL and VDE approvals 
- Recyclable owing to omission of encapsulation and glue
- RoHS-compatible

Applications

- Suppression of common-mode interferences
- Compact switch-mode power applications
- Electronic ballasts in lamps

Terminals

- Base material CuNi18Zn20
- Layer composition Ni, Sn
- Hot-dipped
- Pins 0.6 × 0.6 (mm)
- Lead spacing 10 × 12.5 (mm)

Marking

- B82731M: Manufacturer, rated inductance, rated current, ordering code, approval symbols, date of manufacture (WWYY)
- B82731H: Manufacturer, ordering code

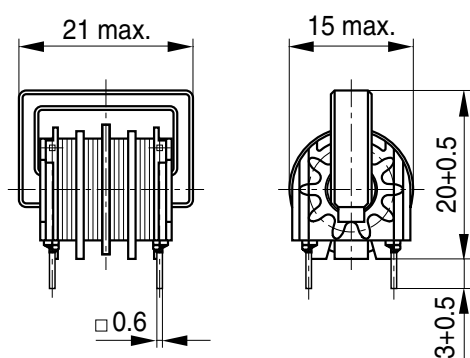
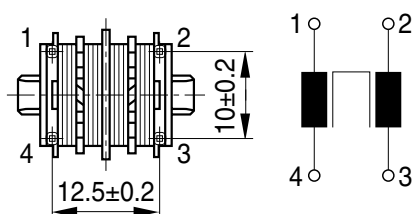
Delivery mode

Blister tray in cardboard box

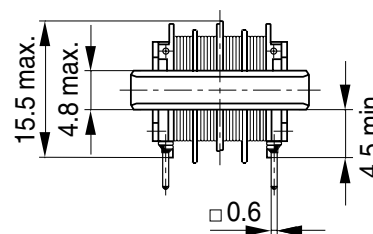
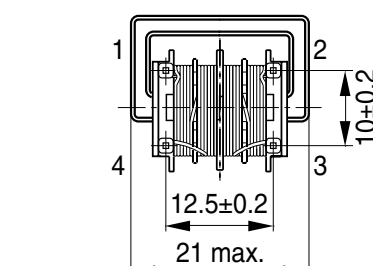
Dimensional drawings and pin configurations (dimensions in mm)

Vertical version (B82731M)

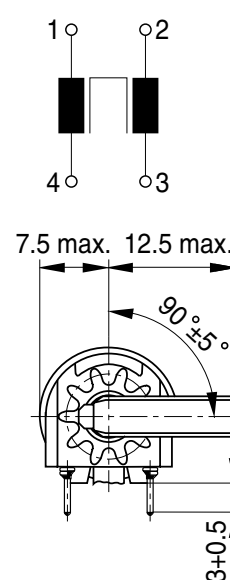
Horizontal version (B82731H)



IND0284-2



Dimensions in mm





IND0285-5

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, typ. 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. 8 g |
| Approvals | EN 60938-2, UL 1283 |

Characteristics and ordering codes

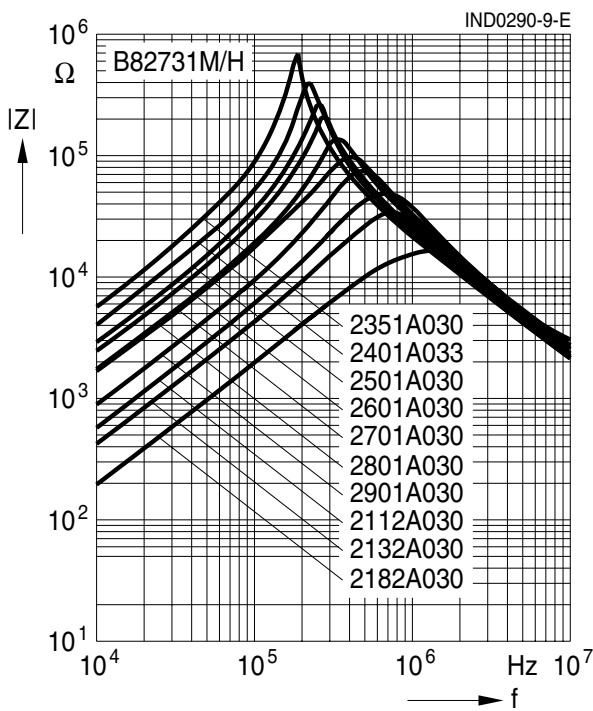
| I_R A | L_R mH | $L_{stray,typ}$ μ H | R_{typ} m Ω | Ordering code | | Approvals | |
|------------|-------------|----------------------------|-------------------------|------------------|--------------------|---|---|
| | | | | Vertical version | Horizontal version |  |  |
| 0.35 | 100 | 1000 | 4500 | B82731M2351A030 | B82731H2351A030 | × | × |
| 0.4 | 68 | 700 | 3000 | B82731M2401A033 | B82731H2401A033 | × | × |
| 0.5 | 47 | 470 | 2000 | B82731M2501A030 | B82731H2501A030 | × | × |
| 0.6 | 39 | 390 | 1500 | B82731M2601A030 | B82731H2601A030 | × | × |
| 0.7 | 27 | 270 | 1000 | B82731M2701A030 | B82731H2701A030 | × | × |
| 0.8 | 22 | 220 | 800 | B82731M2801A030 | B82731H2801A030 | — | — |
| 0.9 | 15 | 150 | 600 | B82731M2901A030 | B82731H2901A030 | × | × |
| 1.1 | 10 | 100 | 400 | B82731M2112A030 | B82731H2112A030 | × | × |
| 1.3 | 6.8 | 70 | 280 | B82731M2132A030 | B82731H2132A030 | × | × |
| 1.8 | 3.3 | 35 | 140 | B82731M2182A030 | B82731H2182A030 | × | × |

× = approval granted

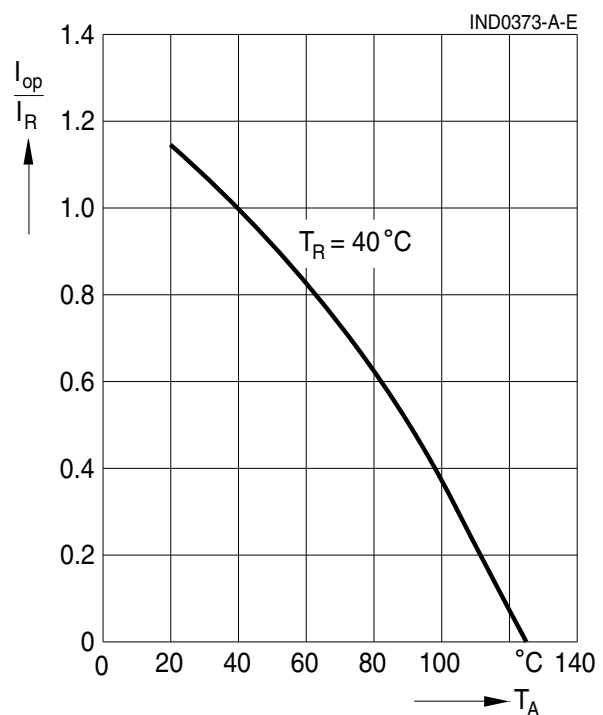
Sample kit available. Ordering code: B82731X001.

For more information refer to chapter “Sample kits”.

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.
 - 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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