Power line chokes

Current-compensated E core double chokes
250 V AC, 0.3 … 1.8 A, 3.3 … 100 mH

Series/Type: **B82731T**

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Rated voltage 250 V AC
Rated current 0.3 A to 1.8 A
Rated inductance 3.3 mH to 100 mH



Construction

- Current-compensated double choke
- Closed E ferrite core
- Closed PET coil former with 4 sections (UL 94 V-0)
- Without encapsulation
- 4-section winding
- Clearances > 2.5 mm, creepage distances > 3 mm

Features

- High resonance frequency due to 2-section winding
- High pulse strength
- Low whirring noise
- Approx. 2% stray inductance for symmetrical interference suppression
- Suitable for wave soldering
- Design complies with EN 60938-2 (VDE 0565-2)
- VDE and UL approval
- RoHS-compatible

Applications

- Suppression of common-mode interferences
- Electronic ballasts for lamps
- Switch-mode power supplies for consumer electronics

Terminals

- Pins 0.64 × 0.64 (mm)
- Lead spacing 10 × 10 (mm)

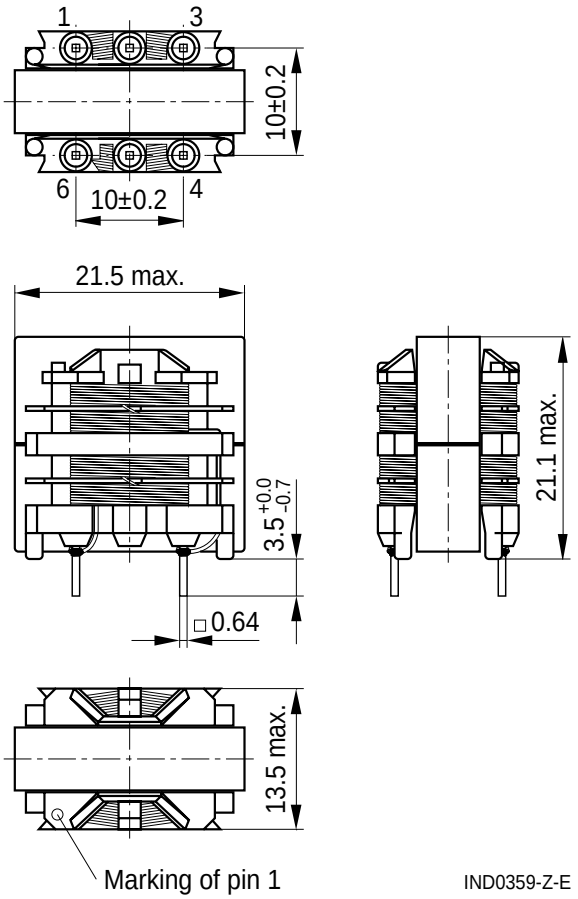
Marking

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

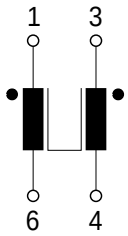
Delivery mode

Blister tray in cardboard box

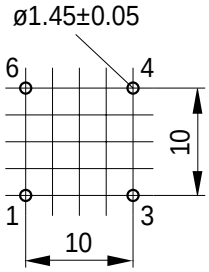
Dimensional drawing and pin configuration



IND0359-Z-E



IND0360-U



Recommended hole arrangement
(view in mounting direction)

IND0361-L-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. 15 g
Approvals	EN 60938-2, UL 1283

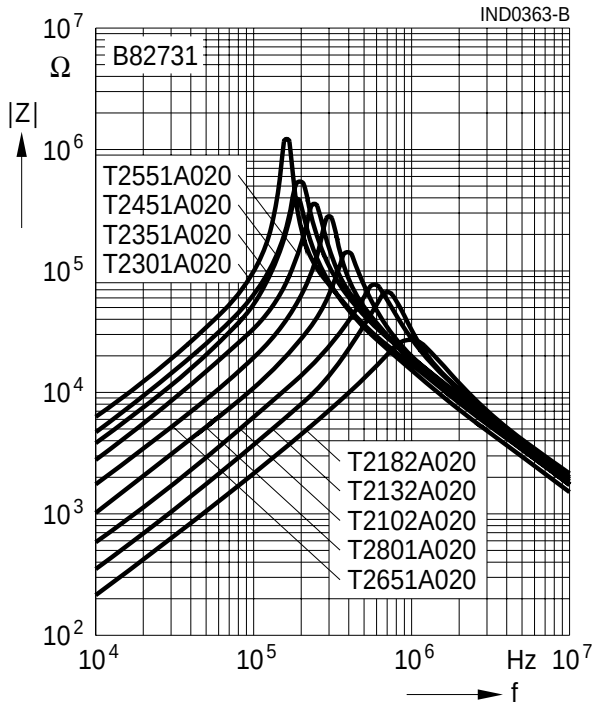
Characteristics and ordering codes

I_R A	L_R mH	$L_{stray,typ}$ µH	R_{typ} mΩ	Ordering code	Approvals	
0.30	100	2000	6600	B82731T2301A020	×	×
0.35	68	1300	4400	B82731T2351A020	×	×
0.45	47	950	2800	B82731T2451A020	×	×
0.55	39	800	2200	B82731T2551A020	×	×
0.65	27	550	1600	B82731T2651A020	×	×
0.8	15	300	950	B82731T2801A020	×	×
1.0	10	200	630	B82731T2102A020	×	×
1.3	6.8	140	370	B82731T2132A020	×	×
1.8	3.3	65	200	B82731T2182A020	×	×

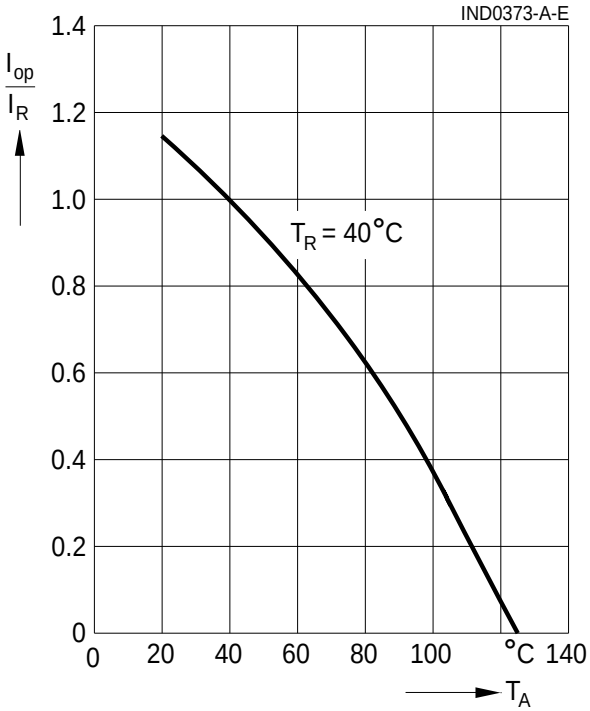
× = approval granted

Sample kit available. Ordering code: B82731X002
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.

Important notes

The following applies to all products named in this publication:

1. Some parts of this publication contain **statements about the suitability of our products for certain areas of application**. These statements are based on our knowledge of typical requirements that are often placed on our products in the areas of application concerned. We nevertheless expressly point out **that such statements cannot be regarded as binding statements about the suitability of our products for a particular customer application.**

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