



Power line chokes

Current-compensated ring core double chokes
250 V AC, 1.2 ... 68 mH, 0.3 ... 3 A, +40 °C / +60 °C

Series/Type: **B82722A/J**

Date: December 2023

Power line chokes
B82722A/J
Current-compensated ring core double chokes
Rated voltage 250 V AC
Rated inductance 1.2 ... 68 mH
Rated current 0.3 ... 3 A / +40 °C, +60 °C
Construction

- Current-compensated ring core double choke
- Ferrite core with epoxy coating (UL 94 V-0)
- Plastic case with in-molded pins (UL 94 V-0)¹⁾
- Potting (UL 94 V-0)
- Sector winding


B82722A
Features

- High resonance frequency due to special winding technique
- Approx. 1% stray inductance for symmetrical interference suppression
- Suitable for wave soldering
- Design complies with EN 60938-2 (VDE 0565-2) and UL 1283
- UL²⁾ and/or ENEC (VDE) approvals
- RoHS-compatible


B82722J
Applications

- Suppression of common-mode interferences
- Switch-mode power applications
- Electronic ballasts in lamps
- Power inverters

Terminals

- Base material CuNi18Zn20
- Layer composition Ni, Sn
- Hot-dipped
- Pins 0.7 × 0.7 (mm)
- Lead spacing 10 × 12.5 (mm) or 20 × 12.5 (mm)

Marking

- Product brand, approval signs and VDE standard number, ordering code, graphic symbol, rated current, rated voltage, rated inductance, date of manufacture (YYWWD.internal ID code)

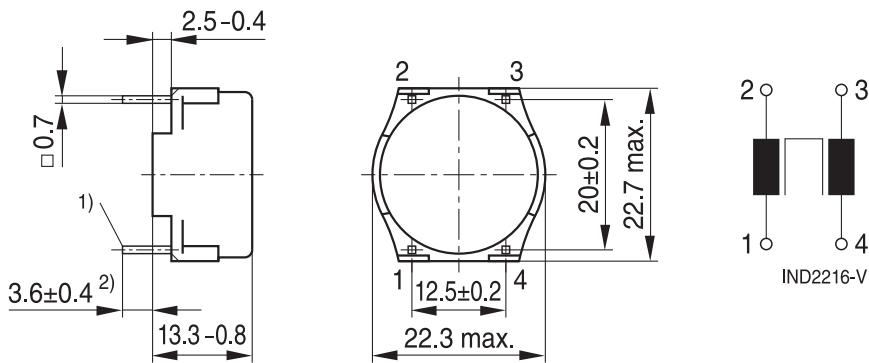
Delivery mode

- Blister tray in cardboard box
- Delivery in tube magazine is available on request for B82722J*

1) Additionally certified values:

| | |
|--|---------|
| Glow wire flammability index (GWFI to IEC 60695-2-12): | +850 °C |
| Glow wire ignition temperature (GWIT to IEC 60695-2-13): | +775 °C |
| Comparative tracking index (CTI to IEC 60112): | 175 V |
| Ball pressure test (BP to IEC 60695-10-2): | +125 °C |

2) UL approval with 300 V AC

Dimensional drawings and pin configurations
Horizontal version (B82722A)


1) Tin tips permissible

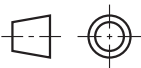
2) Dimension does not include tin tip

IND2220-Z-E

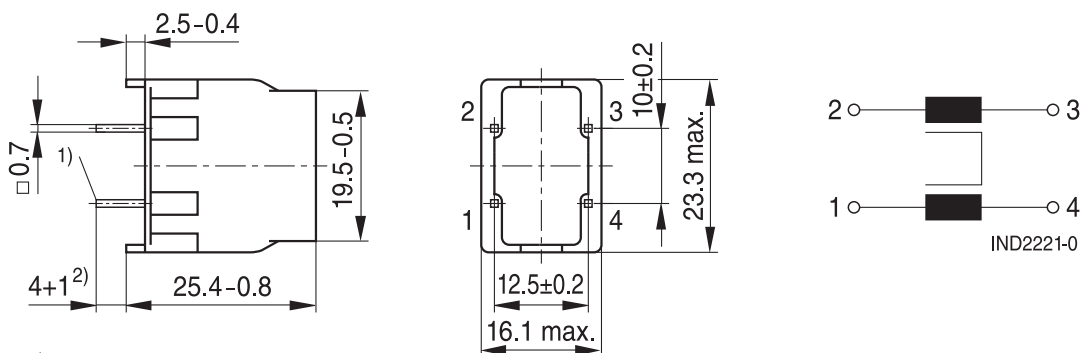
Tolerances to ISO 2768-c / ISO 8015.

Size ISO 14405 (E)

All dimensions in mm



IND2200-F-E

Vertical version (B82722J)


1) Tin tips permissible

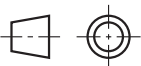
2) Dimension does not include tin tip

IND2222-1-E

Tolerances to ISO 2768-c / ISO 8015.

Size ISO 14405 (E)

All dimensions in mm





IND2200-F-E

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 or +60 °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% 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 ±3) °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. 10 g |
| Approvals | IEC/EN 60938-2, UL 1283 (E70122) |

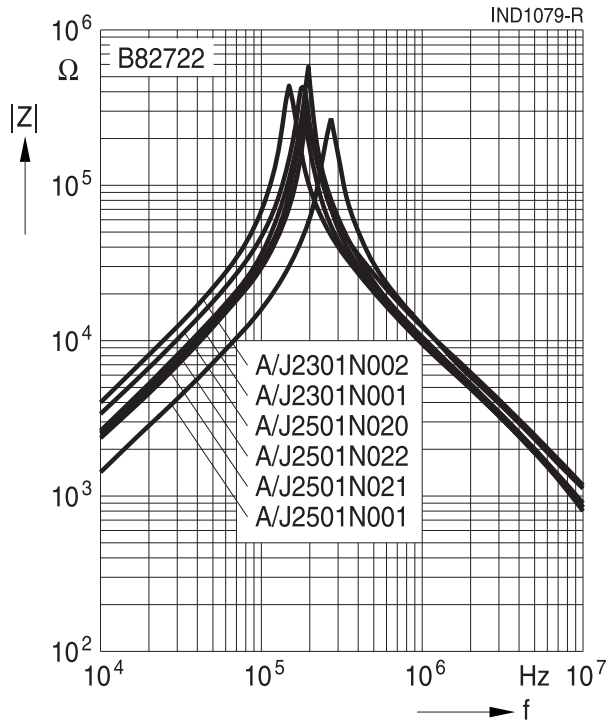
Characteristics and ordering codes

| I _R A | L _R mH | L _{stray,typ} μH | R _{typ} mΩ | T _R °C | Ordering code | | Approvals | |
|---------------------|----------------------|------------------------------|------------------------|----------------------|--------------------|------------------|---|---|
| | | | | | Horizontal version | Vertical version |  |  |
| 0.3 | 68 | 800 | 2500 | +60 | B82722A2301N002 | B82722J2301N002 | × | × |
| 0.3 | 47 | 700 | 2500 | +60 | B82722A2301N001 | B82722J2301N001 | × | × |
| 0.5 | 56 | 600 | 2000 | +40 | B82722A2501N020 | B82722J2501N020 | × | × |
| 0.5 | 47 | 550 | 1500 | +60 | B82722A2501N022 | B82722J2501N022 | × | × |
| 0.5 | 39 | 400 | 1120 | +60 | B82722A2501N021 | B82722J2501N021 | × | × |
| 0.5 | 27 | 350 | 1200 | +60 | B82722A2501N001 | B82722J2501N001 | × | × |
| 0.8 | 27 | 270 | 600 | +60 | B82722A2801N020 | B82722J2801N020 | × | × |
| 1.0 | 15 | 170 | 540 | +60 | B82722A2102N020 | B82722J2102N020 | × | × |
| 1.0 | 10 | 150 | 480 | +60 | B82722A2102N001 | B82722J2102N001 | × | × |
| 1.5 | 10 | 90 | 240 | +60 | B82722A2152N020 | B82722J2152N020 | × | × |
| 1.3 | 6.8 | 90 | 230 | +60 | B82722A2132N001 | B82722J2132N001 | × | × |
| 1.7 | 4.0 | 45 | 175 | +60 | B82722A2172N001 | B82722J2172N001 | × | × |
| 2.0 | 4.2 | 45 | 130 | +40 | B82722A2202N020 | B82722J2202N020 | × | × |
| 2.0 | 3.3 | 35 | 133 | +60 | B82722A2202N002 | B82722J2202N002 | × | × |
| 2.0 | 2.2 | 30 | 130 | +60 | B82722A2202N001 | B82722J2202N001 | × | × |
| 2.5 | 1.7 | 20 | 80 | +60 | B82722A2252N001 | B82722J2252N001 | × | × |
| 3.0 | 1.2 | 17 | 56 | +60 | B82722A2302N001 | B82722J2302N001 | × | × |

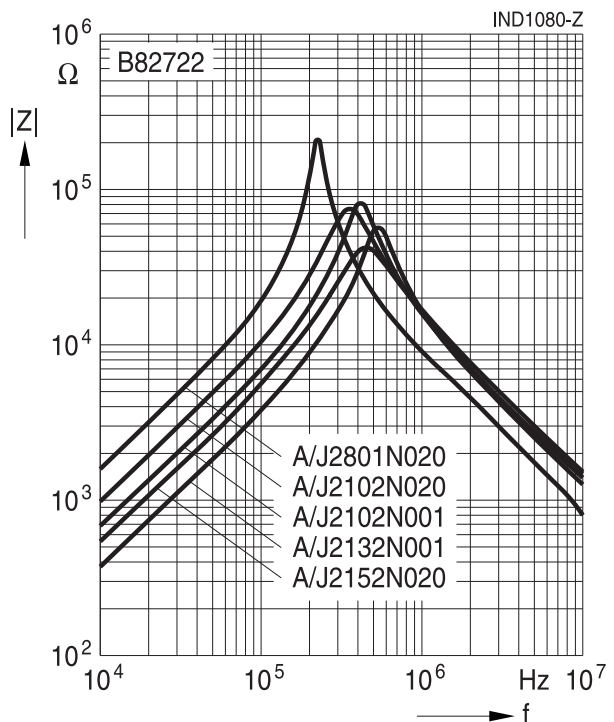
× = approval granted

Current-compensated ring core double chokes

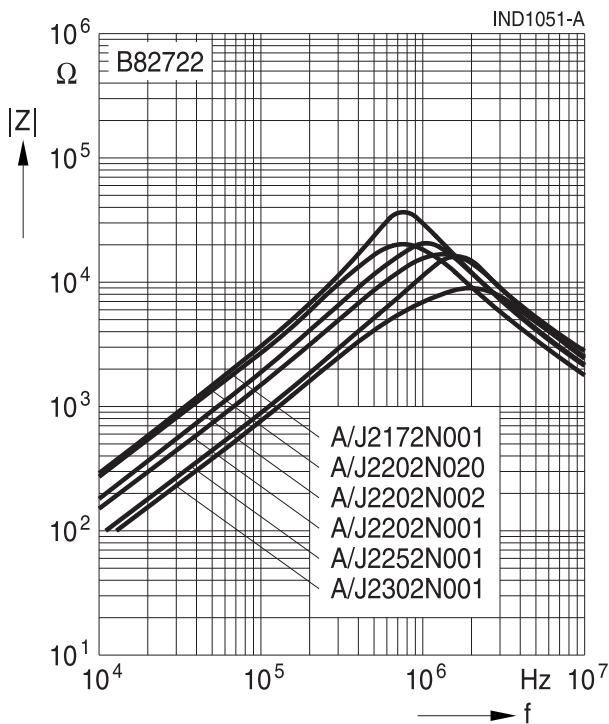
Impedance $|Z|$ versus frequency f
measured with windings in parallel at +20 °C,
typical values



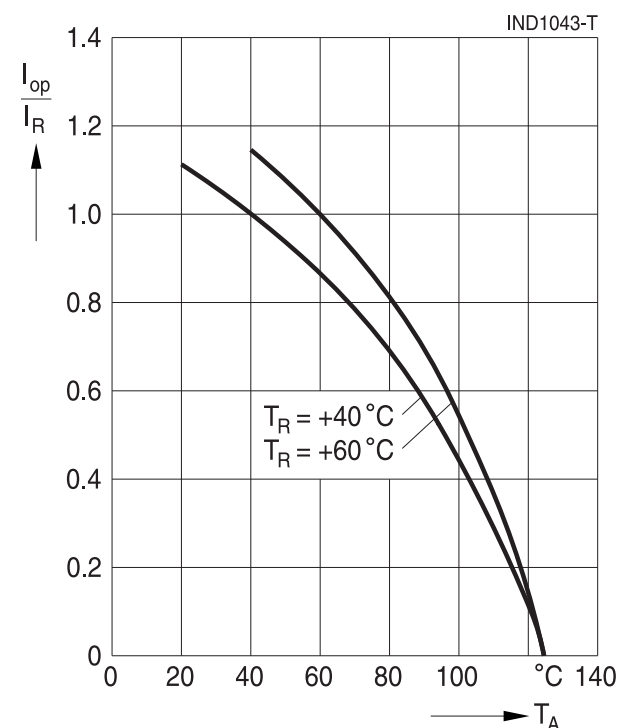
Impedance $|Z|$ versus frequency f
measured with windings in parallel at +20 °C,
typical values



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



Current derating I_{op}/I_R
versus temperature T_A



Cautions and warnings

- Please note the recommendations in our Inductors data book (latest edition), online catalogs and in the data sheets.
 - Particular attention should be paid to the derating curves, if given. Derating applies in the case the ambient temperature in application exceeds the rated temperature of the component.
 - Ensure the operation temperature of the component in application not to exceed the maximum specified value or the upper climatic category temperature.
 - 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. It is possible for washing varnish agent residues to have a negative effect in the long-term on wire insulation.

Washing processes may damage the product due to the possible static or cyclic mechanical loads (e.g., ultrasonic cleaning). They may cause cracks to develop on the product and its parts, which might lead to reduced reliability or lifetime.
- The following points must be observed if the components are potted, sealed, or varnished in customer applications:
 - Many potting, sealing, or varnishing 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, sealing or varnishing materials used attack or destroy the wire insulation, plastics, or glue.
 - The effect of the potting, sealing, or varnishing materials may change the high-frequency behavior of the components.
- Magnetic core materials such as ferrites are sensitive to direct impact. This can cause the core material to flake or lead to breakage of the magnetic core material.
- Any type of tension or pressure on the product may result in damage and affect its functionality and reliability.
 - The products are only to be attached to fixings or mounting holes provided for this purpose in accordance with the data sheet.
 - If additional mechanical forces are applied to the component, e.g., application of gap pads, it is necessary to check whether they attack or destroy any part of the component.
 - It is not permitted for the product specified in the data sheet to assume a mechanical function in the final application.
- Inductance value can drop if external metallic or magnetic parts will be put close to the coil or into the air gap of the coil or core or magnetic material.
- Even for customer-specific products, conclusive validation of the component in the circuit can only be carried out by the customer.

Display of ordering codes for TDK Electronics products

The ordering code for one and the same product can be represented differently in data sheets, data books, other publications, on the company website, or in order-related documents such as shipping notes, order confirmations and product labels. **The varying representations of the ordering codes are due to different processes employed and do not affect the specifications of the respective products.** Detailed information can be found on the Internet under www.tdk-electronics.tdk.com/orderingcodes.

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2. We also point out that **in individual cases, a malfunction of electronic components or failure before the end of their usual service life cannot be completely ruled out in the current state of the art, even if they are operated as specified**. In customer applications requiring a very high level of operational safety and especially in customer applications in which the malfunction or failure of an electronic component could endanger human life or health (e.g. in accident prevention or life-saving systems), it must therefore be ensured by means of suitable design of the customer application or other action taken by the customer (e.g. installation of protective circuitry or redundancy) that no injury or damage is sustained by third parties in the event of malfunction or failure of an electronic component.
3. **The warnings, cautions and product-specific notes must be observed.**
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6. Unless otherwise agreed in individual contracts, **all orders are subject to our General Terms and Conditions of Supply**.

Important notes

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Release 2023-08