



Power line chokes

Current-compensated ring core double chokes
250 V AC, 1 ... 16 A, 0.56 ... 82 mH

Series/Type: B82725A

Date: October 2008



Rated voltage 250 V AC
Rated current 1 A to 16 A
Rated inductance 0.56 mH to 82 mH



Construction

- Current-compensated ring core double choke
- Ferrite core
- Polycarbonate case (UL 94 V-0)
- Polyurethane potting (UL 94 V-0)
- Sector winding

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)
- UL and VDE approvals  
- RoHS-compatible

Applications

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

Terminals

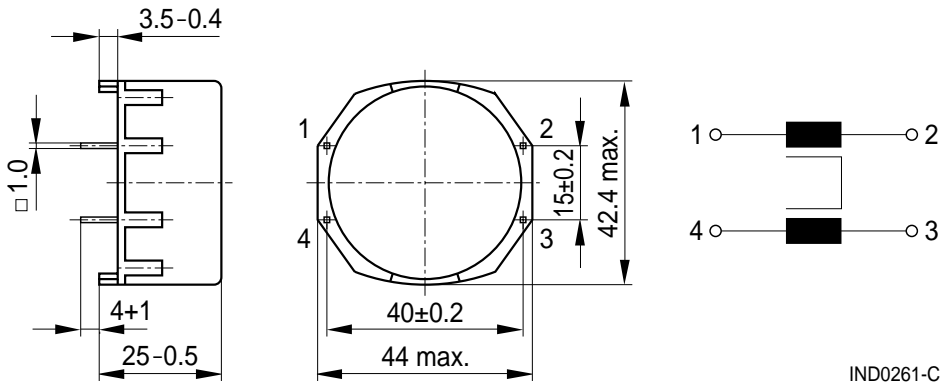
- Base material CuNi18Zn20
- Layer composition Ni, Sn
- Hot-dipped
- Pins 1 × 1 (mm)
- Lead spacing 40 × 15 (mm)

Marking

Manufacturer, approval signs and/or VDE standard number, ordering code, graphic symbol, rated current, rated voltage, rated inductance, date of manufacture (YYWWD)

Delivery mode

Blister tray in cardboard box

Dimensional drawing and pin configuration


IND0261-C



Tolerances to ISO 2768-C unless otherwise noted.

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 / 45 °C / 55 °C / 60 °C |
| Rated current I_R | Referred to 50 Hz and rated temperature |
| Rated inductance L_R | Measured with Agilent 4284A at 0.1 mA, 20 °C Measuring frequency: $L_R \leq 1$ mH = 100 kHz $L_R > 1$ mH = 10 kHz 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 5 mA, 20 °C, typical values Measuring frequency: $L_R \leq 1$ mH = 100 kHz $L_R > 1$ mH = 10 kHz |
| 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. 46 g ... 72 g |
| Approvals | EN 60938-2, UL 1283 |

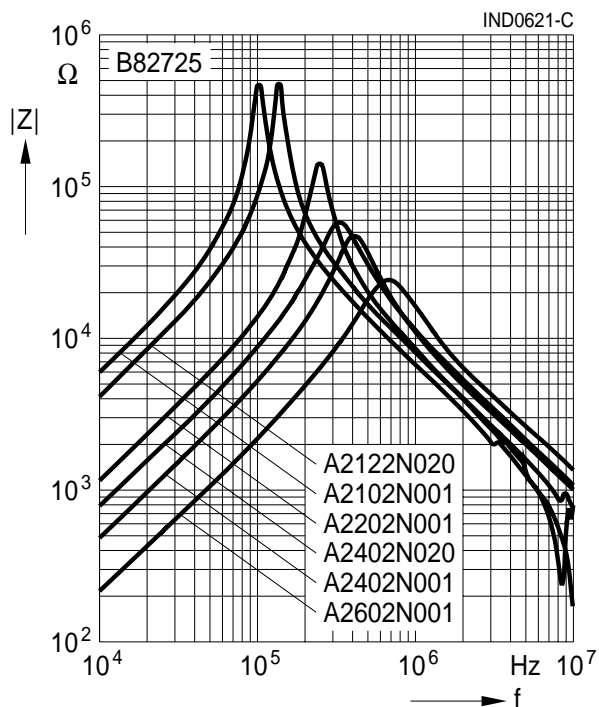
Characteristics and ordering codes

| I_R A | L_R mH | $L_{\text{stray,typ}}$ μH | R_{typ} $\text{m}\Omega$ | T_R $^{\circ}\text{C}$ | Ordering code | Approvals | |
|------------|-------------|---|--------------------------------------|-----------------------------|-----------------|---|---|
| | | | | | |  |  |
| 1 | 68 | 850 | 1300 | 60 | B82725A2102N001 | × | × |
| 1.2 | 82 | 800 | 950 | 60 | B82725A2122N020 | × | × |
| 2 | 18 | 220 | 330 | 60 | B82725A2202N001 | × | × |
| 4 | 14 | 100 | 80 | 60 | B82725A2402N020 | — | — |
| 4 | 6.8 | 75 | 80 | 60 | B82725A2402N001 | × | × |
| 6 | 3.9 | 40 | 40 | 60 | B82725A2602N001 | × | × |
| 8 | 3.9 | 35 | 31 | 40 | B82725A2802N020 | — | — |
| 8 | 2.7 | 25 | 22 | 60 | B82725A2802N001 | × | × |
| 10 | 1.8 | 20 | 14 | 60 | B82725A2103N001 | × | × |
| 12 | 3.3 | 16 | 12 | 60 | B82725A2123N040 | — | — |
| 12 | 1.0 | 14 | 11 | 55 | B82725A2123N001 | — | — |
| 14 | 1.2 | 12 | 10 | 45 | B82725A2143N020 | — | — |
| 16 | 0.56 | 6 | 7 | 40 | B82725A2163N020 | — | — |

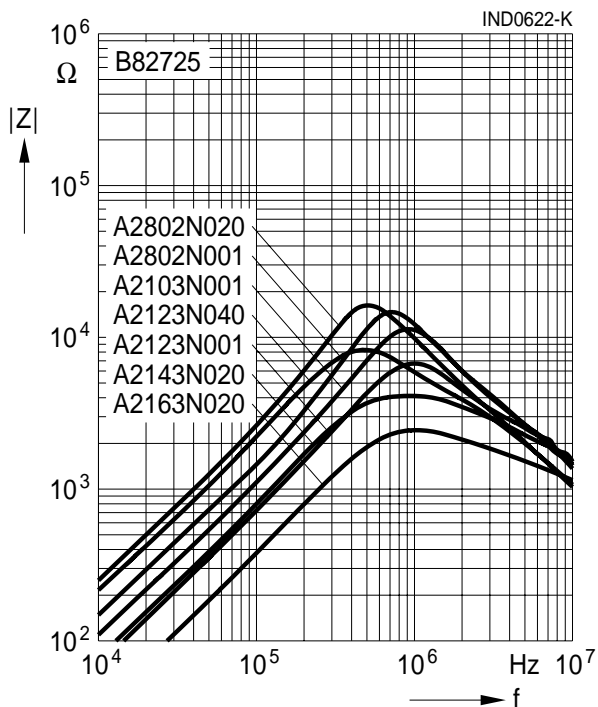
× = approval granted

Current-compensated ring core double chokes

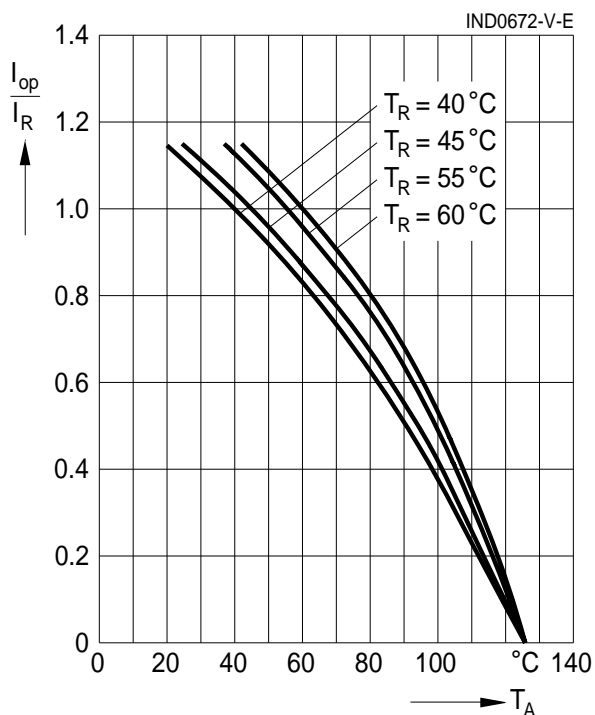
Impedance $|Z|$ versus frequency f
measured with windings in parallel at 20 °C,
typical values



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



Current derating I_{op}/I_R
versus 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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