



Power line chokes

Current-compensated ring core double chokes
250 V AC, 6 ... 10 A, 2.8 ... 7.8 mH

Series/Type: B82725S2*

Date: October 2008

Rated voltage 250 V AC
Rated current 6 A to 10 A
Rated inductance 2.8 mH to 7.8 mH

Construction

- Current-compensated ring core double choke
- Ferrite core
- Polycarbonate base plate (UL 94 V-0)
- Choke fixed on base plate with tape
- Sector winding
- Clearance ≥ 2.5 mm, creepage distance ≥ 3 mm



Features

- Approx. 1% stray inductance for symmetrical interference suppression
- Suitable for wave soldering
- Design complies with EN 60938-2 (VDE 0565-2)
- RoHS-compatible

Applications

- Suppression of common-mode interferences
- Switch-mode applications

Terminals

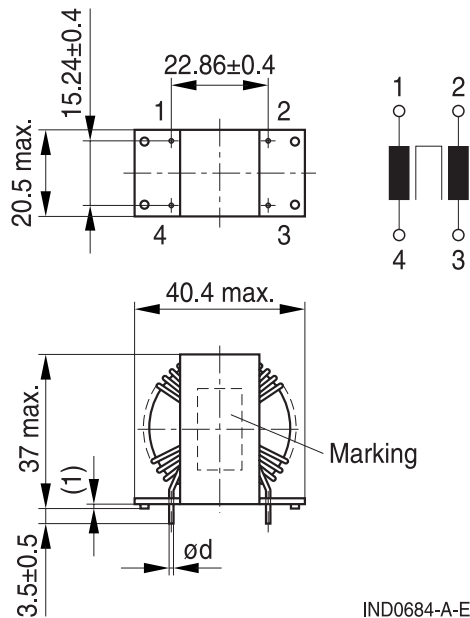
- Ends of winding wires
- Hot-dip tinned

Marking

Manufacturer, ordering code, rated current, rated voltage, rated inductance, graphic symbol, date of manufacture (MM.YY)

Delivery mode

Cardboard box

Dimensional drawing and pin configuration


Dimensions in mm

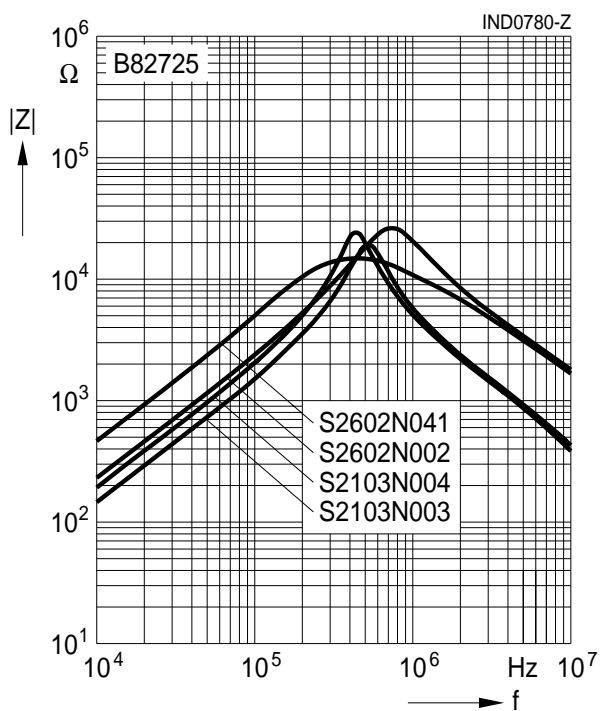
Technical data and measuring conditions

| | |
|--|--|
| Rated voltage V_R | 250 V AC (50/60 Hz) |
| Test voltage V_{test} | 1500 V AC / 2100 V DC, 2 s (line/line) |
| Rated temperature T_R | 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 ±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. 50 g |

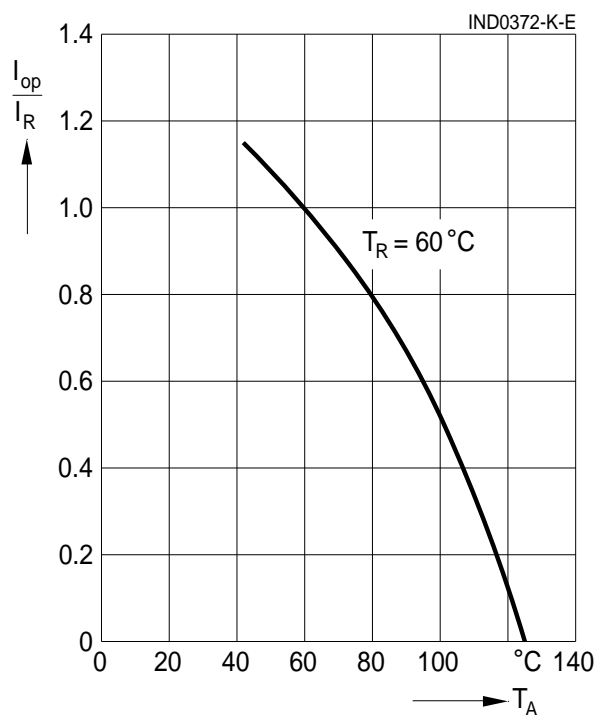
Characteristics and ordering codes

| I_R | L_R | $L_{stray,typ}$ | R_{typ} | Wire \varnothing $d \pm 0.1$ mm | Ordering code |
|-------|-------|-----------------|------------|---|-----------------|
| A | mH | μ H | m Ω | | |
| 6 | 7.8 | 35 | 24 | 1.0 | B82725S2602N041 |
| 6 | 3.9 | 33 | 24 | 1.0 | B82725S2602N002 |
| 10 | 3.3 | 35 | 13.5 | 1.32 | B82725S2103N004 |
| 10 | 2.8 | 30 | 12.5 | 1.32 | B82725S2103N003 |

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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