

Data and signal line chokes

Common-mode chokes, ring core
4.7 ... 10 mH, 200 ... 300 mA, 40 °C

Series/Type: **B82720H14**
Date: October 2008

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Rated voltage 42 V AC/80 V DC
Rated inductance 4.7 mH to 10 mH
Rated current 200 mA to 300 mA



Construction

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

Features

- Suitable for automatic insertion
- Suitable for wave soldering
- RoHS-compatible

Applications

- Telecom switching systems
- Terminal systems
- Measuring and control lines

Terminals

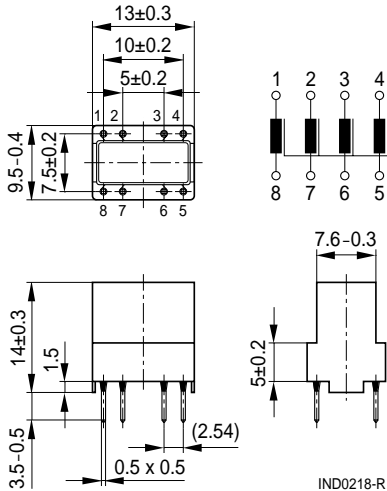
- Base material CuNi18Zn20
- Layer composition Ni, Sn
- Hot-dipped

Marking

Manufacturer, ordering code, rated inductance, rated current, date of manufacture (YYWWDD)

Delivery mode

Cardboard box

Dimensional drawing and pin configuration


Tolerances to ISO 2768-M
unless otherwise noted.

Dimensions in mm

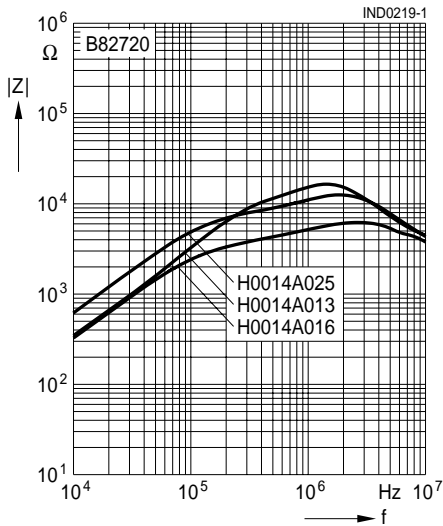
Technical data and measuring conditions

| | |
|--|--|
| Rated voltage V_R | 42 V AC (50/60 Hz) / 80 V DC |
| 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 $L_{\text{stray,typ}}$ | Measured with Agilent 4284A at 10 kHz, 5 mA, 20 °C, typical values |
| DC resistance R_{typ} | Measured at 20 °C, typical values |
| 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. 2.3 g |

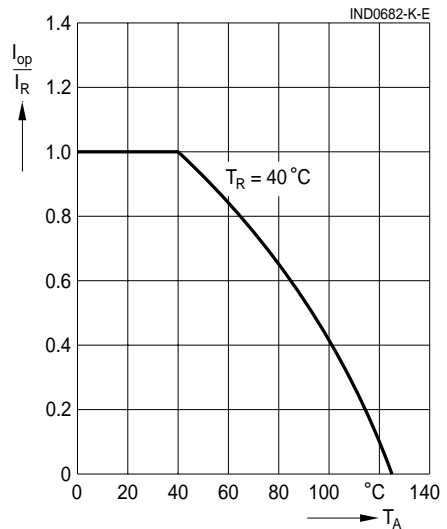
Characteristics and ordering codes

| L_R mH | $L_{\text{stray,typ}}$ nH | I_R mA | R_{typ} m Ω | V_{test} V DC, 2 s | Ordering code |
|-------------|------------------------------|-------------|--------------------------------|--------------------------------|-----------------|
| 4.7 | 350 | 300 | 900 | 750 | B82720H0014A016 |
| 5.0 | 400 | 300 | 550 | 750 | B82720H0014A013 |
| 10 | 450 | 200 | 1300 | 750 | B82720H0014A025 |

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



Current derating I_{op}/I_R
versus ambient temperature



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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