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## Power line chokes

I core chokes

500 V AC, 0.2 ... 2 A, 0.68 ... 82 mH

Series/Type: **B82502W**

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**Rated voltage 500 V AC/600 V DC**

**Rated current 0.2 A to 2 A**

**Rated inductance 0.68 mH to 82 mH**



### Construction

- I core choke
- Ferrite core
- Rectangular plastic case
- Resin potting

### Features

- Low power dissipation
- Suppression of broadband interference
- Compact design
- Suitable for wave soldering
- Design complies with EN 60938-2 (VDE 0565-2)
- RoHS-compatible

### Applications

- Suppression of symmetrical and asymmetrical interference
- High-performance power supplies
- Industrial applications

### Terminals

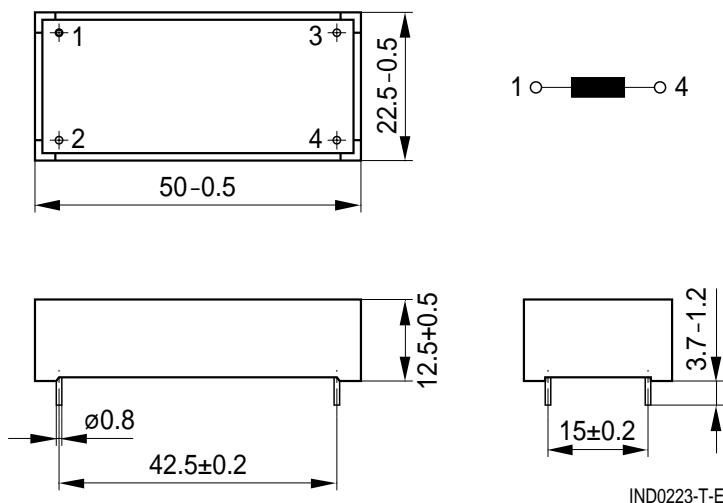
- 4 solder pins
- Base material CuNi18Zn20
- Layer composition Ni, Sn

### Marking

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

### Delivery mode

Cardboard box

**Dimensional drawing and pin configuration**


Tolerances to ISO 2768-C  
unless otherwise noted.

Dimensions in mm

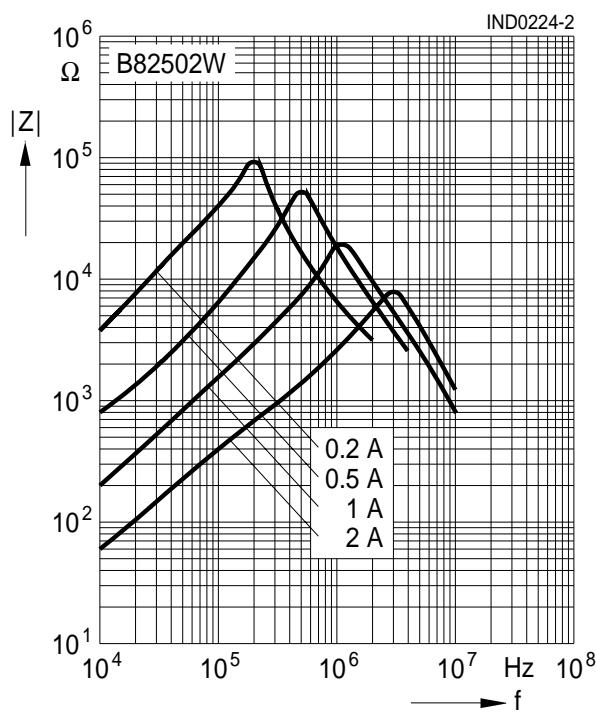
**Technical data and measuring conditions**

Rated voltage $V_R$	500 V AC (50/60 Hz) / 600 V DC During operation between winding and metal parts (VDE 0565-2).
Test voltage $V_{\text{test}}$	2800 V AC, 2 s (winding/core) 2800 V AC, 2 s (winding/case)
Rated temperature $T_R$	60 °C
Rated current $I_R$	Referred to 50 Hz and rated temperature
Permissible operating current at 400 Hz	$0.75 \cdot I_R$
Rated inductance $L_R$	Measured with Agilent 4284A at 0.1 mA, 20 °C Measuring frequency: $L_R \leq 1 \text{ mH} = 100 \text{ kHz}$ $L_R > 1 \text{ mH} = 10 \text{ kHz}$
Inductance tolerance	±20% at 20 °C
DC resistance $R_{\text{typ}}$	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)
Storage conditions (packaged)	−25 °C ... +40 °C, ≤ 75% RH
Climatic category	40/125/56 (to IEC 60068-1)
Weight	Approx. 40 g

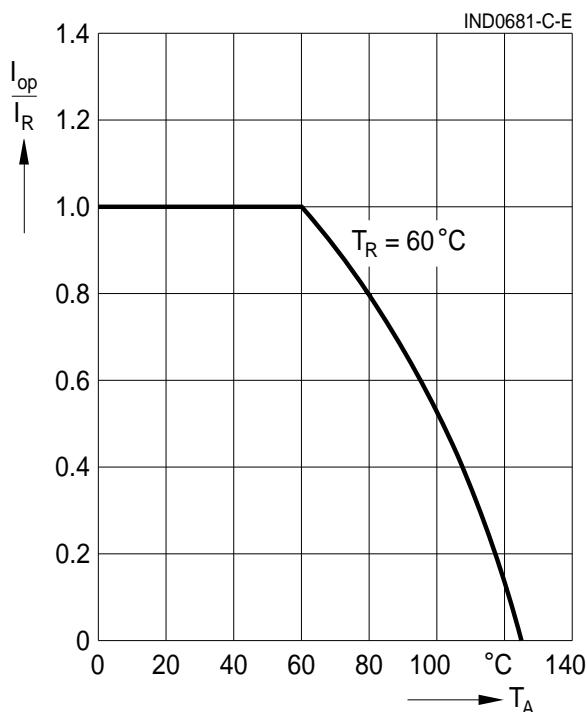
## Characteristics and ordering codes

$I_R$ A	$L_R$ mH	$R_{typ}$ $\Omega$	Ordering code
0.2	82	45	B82502W0000C002
0.5	15	8.5	B82502W0000C005
1	3.3	1.9	B82502W0000C008
2	0.68	0.55	B82502W0000C010

**Impedance  $|Z|$  versus frequency  $f$**   
measured 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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The following applies to all products named in this publication:

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