



## Power line chokes

Ring core chokes with iron powder core  
250 V AC, 0.3 ... 3 A, 0.033 ... 1.2 mH

**Series/Type:**            **B82623**

**Date:**                    October 2008, January 2009


**Rated voltage 250 V AC/350 V DC**  
**Rated current 0.3 A to 3 A**  
**Rated inductance 0.033 mH to 1.2 mH**



### Construction

- Ring core double choke
- Iron powder core
- Polycarbonate case (UL 94 V-0)
- Polyurethane potting (UL 94 V-0)
- Sector winding

### Features

- Effective suppression of differential-mode interferences at higher frequencies
- Approx. 50% of rated inductance for common-mode interference suppression
- Moderate inductance decrease at current load
- Suitable for wave soldering
- Design complies with EN 60938-2 (VDE 0565-2)
- UL and VDE approval 
- RoHS-compatible

### Applications

- Suppression of differential-mode and common-mode interferences
- Compact switch-mode applications
- Reduction of harmonics and PFC

### Terminals

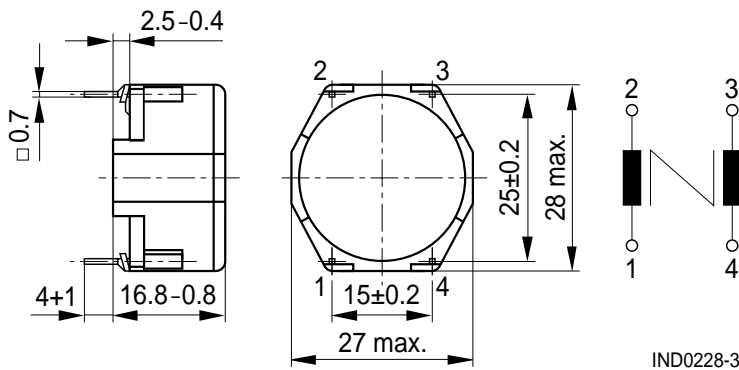
- Base material CuNi18Zn20
- Layer composition Ni, Sn
- Hot-dipped
- Pins 0.7 × 0.7 (mm)
- Lead spacing 15 × 25 (mm)

### Marking

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

### Delivery mode

Blister tray in 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 $V_R$	250 V AC (50/60 Hz) / 350 V DC
Test voltage $V_{test}$	1500 V AC, 2 s (winding/winding)
Rated temperature $T_R$	60 °C
Rated current $I_R$	Referred to 50 Hz and rated temperature
Rated inductance $L_R$	Defined at zero DC current bias 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	$\pm 20\%$ at 20 °C
Inductance at rated current	Measured at DC magnetic bias with $I_R$ with Agilent 4284A at 0.1 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 $\pm$ 5) °C, (3 $\pm$ 0.3) s Wetting of soldering area $\geq 95\%$ (to IEC 60068-2-20, test Ta)
Resistance to soldering heat (wave soldering)	(260 $\pm$ 5) °C, (10 $\pm$ 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, $\leq 75\%$ RH
Weight	Approx. 20 g
Approvals	EN 60938-2, UL 1283

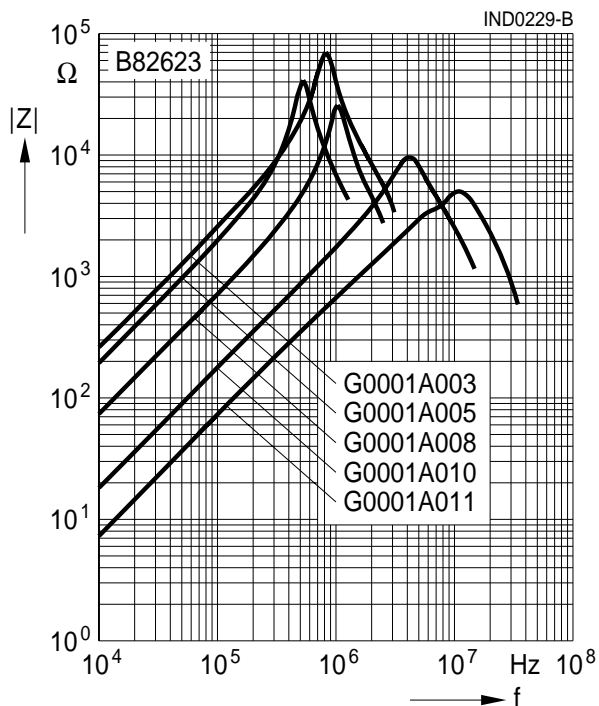
**Characteristics and ordering codes**

$I_R$ A	$L_R$ mH	L at $I_R$ , typ. mH	$R_{typ}$ $\Omega$	Ordering code	Approvals	
						
0.3	1.2	1.05	1.9	B82623G0001A003	×	×
0.5	1.0	0.75	1.1	B82623G0001A005	×	×
1	0.33	0.25	0.4	B82623G0001A008	×	×
2	0.082	0.062	0.1	B82623G0001A010	×	×
3	0.033	0.025	0.045	B82623G0001A011	×	×

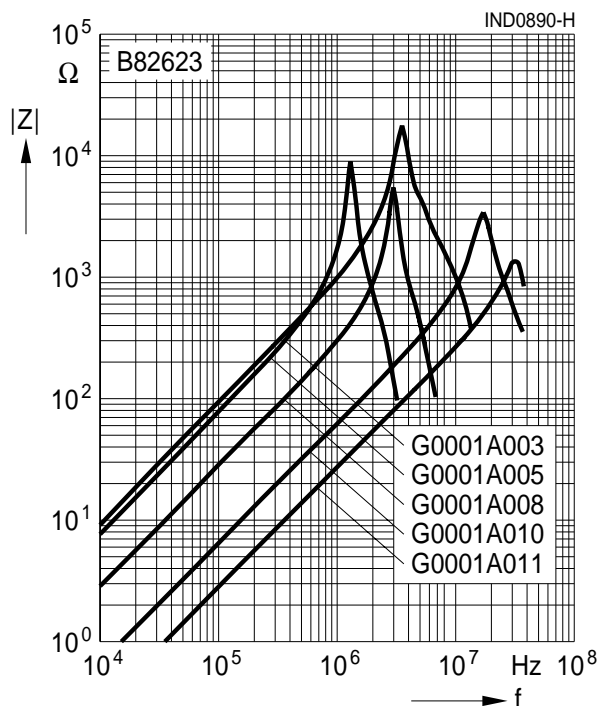
× = approval granted

Ring core chokes with iron powder core

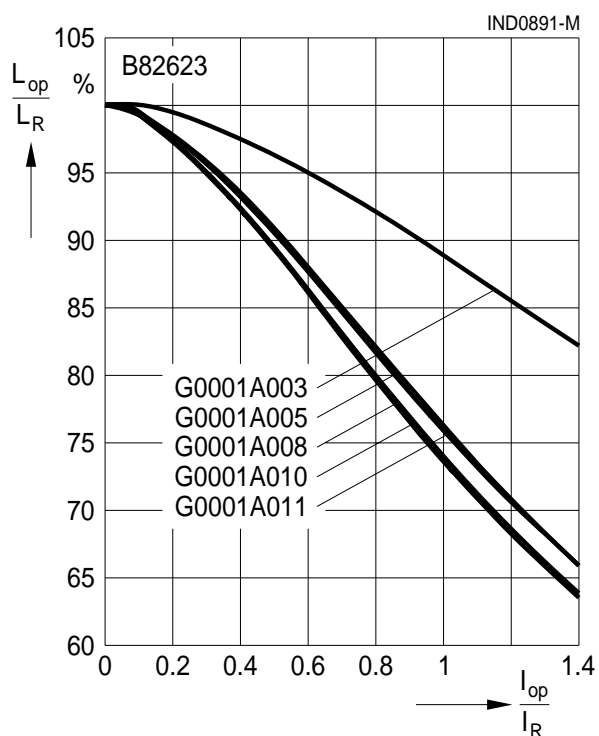
**Impedance  $|Z|$  versus frequency  $f$  (differential-mode)** measured with windings in series at 20 °C, typical values



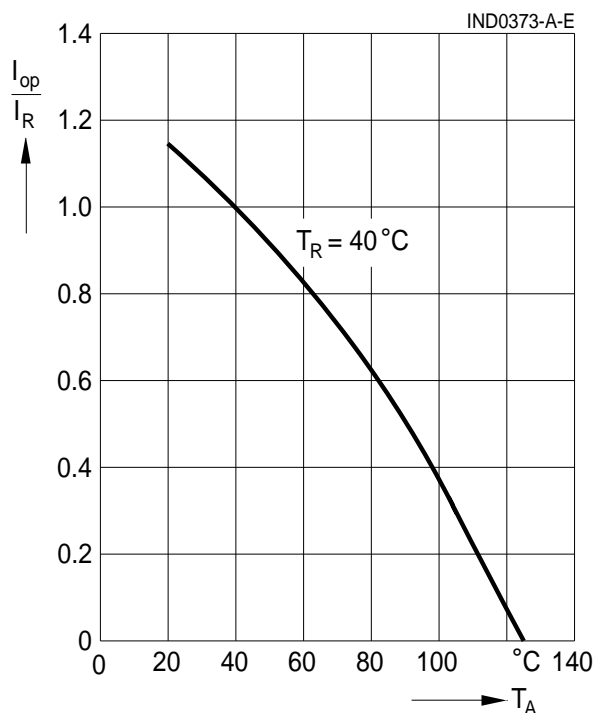
**Impedance  $|Z|$  versus frequency  $f$  (common-mode)** measured with windings in parallel at 20 °C, typical values



**Relative inductance  $L_{op}/L_R$  versus relative current  $I_{op}/I_R$**  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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