



## Power line chokes

Current-compensated ring core double chokes  
250 V AC, 0.5 ... 6 A, 1 ... 56 mH

**Series/Type:** B82723A/J  
**Date:** October 2008

**Rated voltage 250 V AC**



**Rated current 0.5 A to 6 A**

**Rated inductance 1 mH to 56 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/or 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 0.7 × 0.7 (mm)
- Lead spacing 15 × 12.5 (mm) or 25 × 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



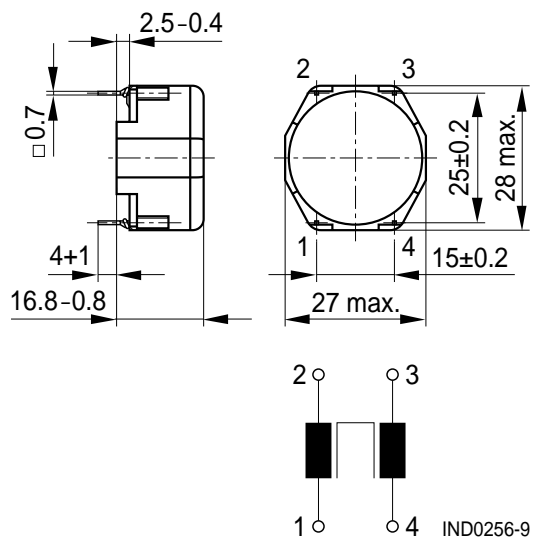
B82723A



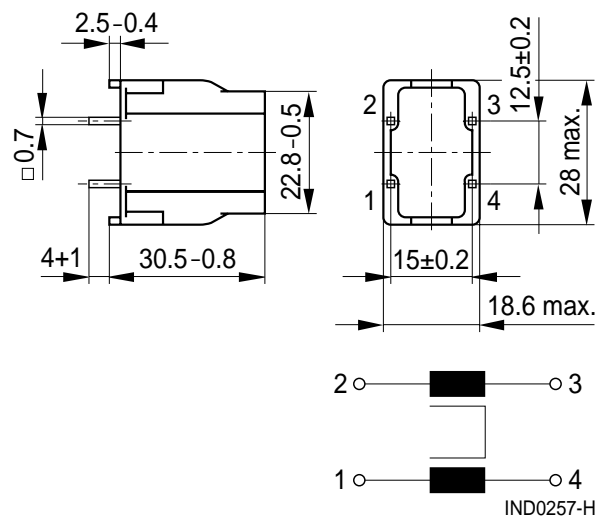
B82723J

**Dimensional drawings and pin configurations**

Horizontal version (B82723A)



Vertical version (B82723J)





Tolerances to ISO 2768-C unless otherwise noted.

Dimensions in mm

**Technical data and measuring conditions**

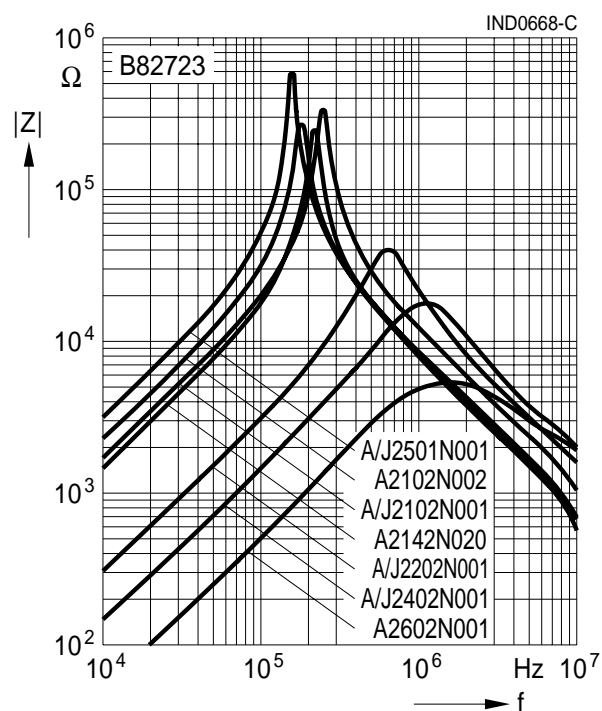
Rated voltage $V_R$	250 V AC (50/60 Hz)
Test voltage $V_{\text{test}}$	1500 V AC, 2 s (line/line)
Rated temperature $T_R$	40 °C / 60 °C / 70 °C
Rated current $I_R$	Referred to 50 Hz and rated temperature
Rated inductance $L_R$	Measured with Agilent 4284A at 0.1 mA, 20 °C Measuring frequency: $L_R \leq 1 \text{ mH} = 100 \text{ kHz}$ $L_R > 1 \text{ mH} = 10 \text{ kHz}$ Inductance is specified per winding.
Inductance tolerance	$\pm 30\%$ 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 5 mA, 20 °C, typical values Measuring frequency: $L_R \leq 1 \text{ mH} = 100 \text{ kHz}$ $L_R > 1 \text{ mH} = 10 \text{ kHz}$
DC resistance $R_{\text{typ}}$	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. 18 g
Approvals	EN 60938-2, UL 1283

**Characteristics and ordering codes**

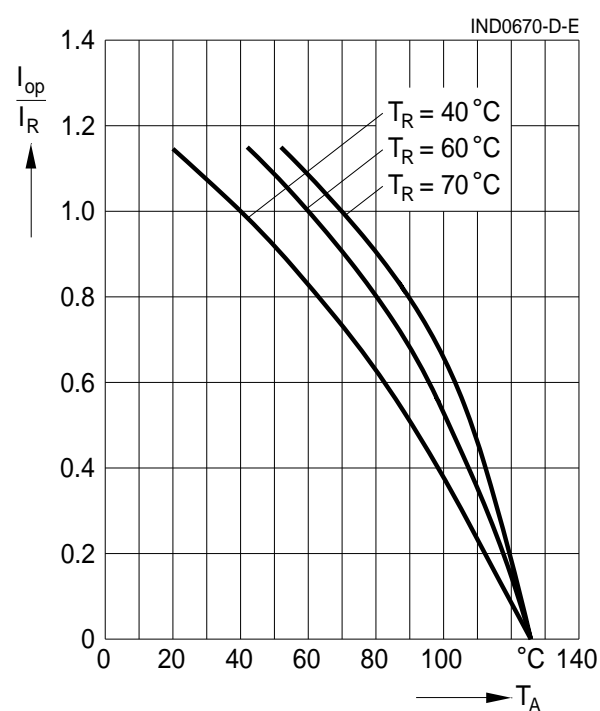
$I_R$ A	$L_R$ mH	$L_{\text{stray, typ}}$ $\mu\text{H}$	$R_{\text{typ}}$ $\text{m}\Omega$	$T_R$ $^{\circ}\text{C}$	Ordering code		Approvals	
					Horizontal version	Vertical version		
0.5	56	800	2100	60	B82723A2501N001	B82723J2501N001	×	×
1.0	39	430	750	40	B82723A2102N002	—	—	—
1.0	27	440	750	60	B82723A2102N001	B82723J2102N001	×	×
1.4	27	270	440	40	B82723A2142N020	—	—	—
2.0	5.6	70	160	60	B82723A2202N001	B82723J2202N001	×	×
4.0	2.7	30	60	60	B82723A2402N001	B82723J2402N001	×	×
6.0	1.0	12	22	70	B82723A2602N001	—	—	—

× = approval granted

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



**Current derating  $I_{\text{op}}/I_R$**   
**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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