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## Power line chokes

Current-compensated ring core double chokes  
250 V AC, 0.3 ... 3 A, 1.2 ... 68 mH

**Series/Type:** B82722A/J



**Date:** October 2008, January 2009

**Rated voltage 250 V AC**  
**Rated current 0.3 A to 3 A**  
**Rated inductance 1.2 mH to 68 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 10 × 12.5 (mm) or 20 × 12.5 (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



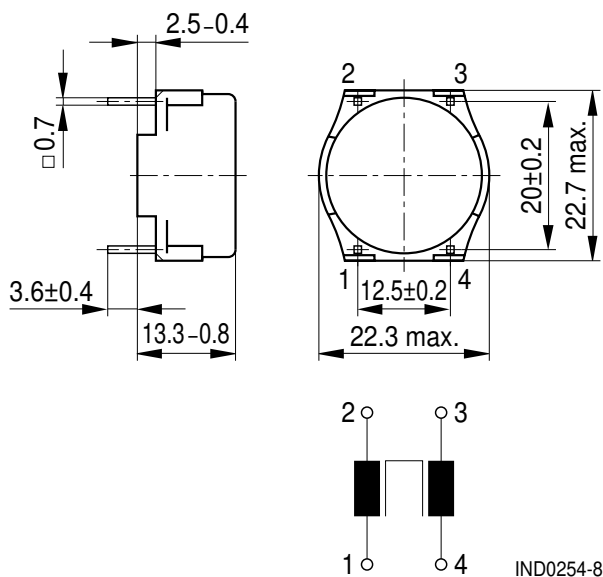
B82722A



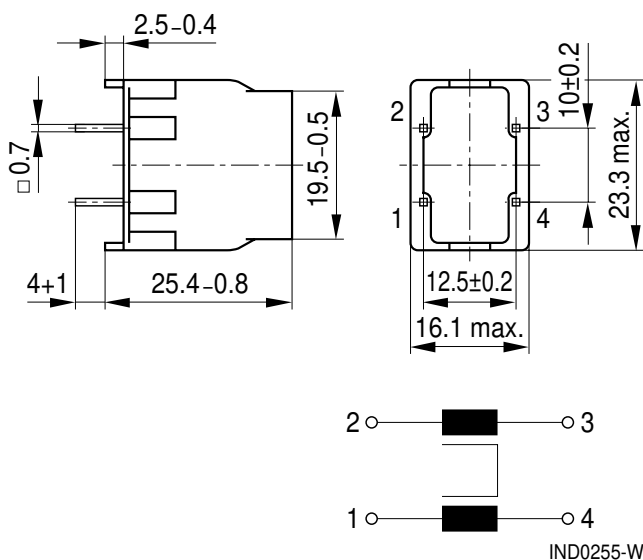
B82722J

**Dimensional drawings and pin configurations**

Horizontal version (B82722A)



Vertical version (B82722J)





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 $V_{test}$	1500 V AC, 2 s (line/line)
Rated temperature $T_R$	40 °C or 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. 10 g
Approvals	EN 60938-2, UL 1283

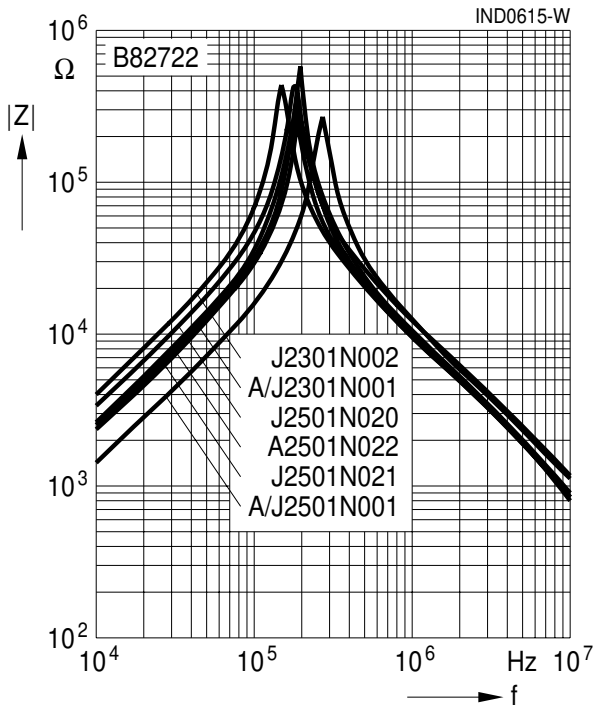
**Characteristics and ordering codes**

I <sub>R</sub> A	L <sub>R</sub> mH	L <sub>stray,typ</sub> μH	R <sub>typ</sub> mΩ	T <sub>R</sub> °C	Ordering code		Approvals	
					Horizontal version	Vertical version		
0.3	68	800	2500	60	–	B82722J2301N002	–	–
0.3	47	700	2500	60	B82722A2301N001	B82722J2301N001	×	×
0.5	56	600	2000	40	–	B82722J2501N020	×	×
0.5	47	550	1500	60	B82722A2501N022	–	–	–
0.5	39	400	1120	60	–	B82722J2501N021	×	×
0.5	27	350	1200	60	B82722A2501N001	B82722J2501N001	×	×
0.8	27	270	600	60	B82722A2801N020	B82722J2801N020	–	–
1	15	170	540	60	B82722A2102N020	–	×	×
1	10	150	480	60	B82722A2102N001	B82722J2102N001	×	×
1.3	6.8	90	230	60	–	B82722J2132N001	–	–
1.5	10	90	240	60	B82722A2152N020	–	×	×
2	4.2	45	130	40	B82722A2202N020	B82722J2202N020	–	–
2	2.2	30	130	60	B82722A2202N001	B82722J2202N001	×	×
2.5	1.7	20	80	60	B82722A2252N001	–	–	–
3	1.2	17	56	60	B82722A2302N001	B82722J2302N001	×	×

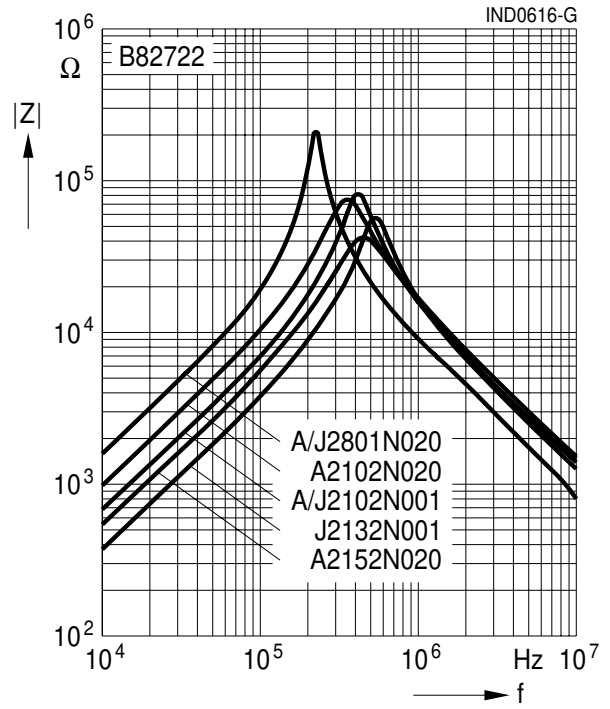
× = approval granted

Current-compensated ring core double chokes

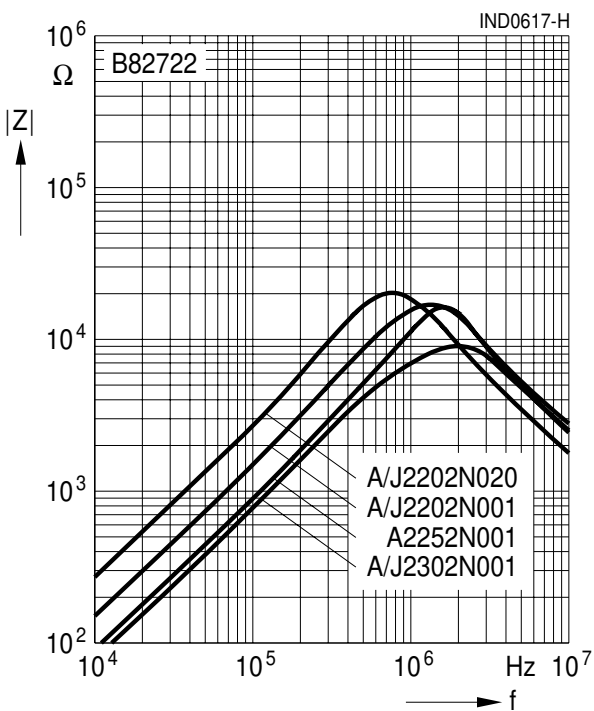
**Impedance  $|Z|$  versus frequency  $f$**   
measured with windings in parallel at 20 °C,  
typical values



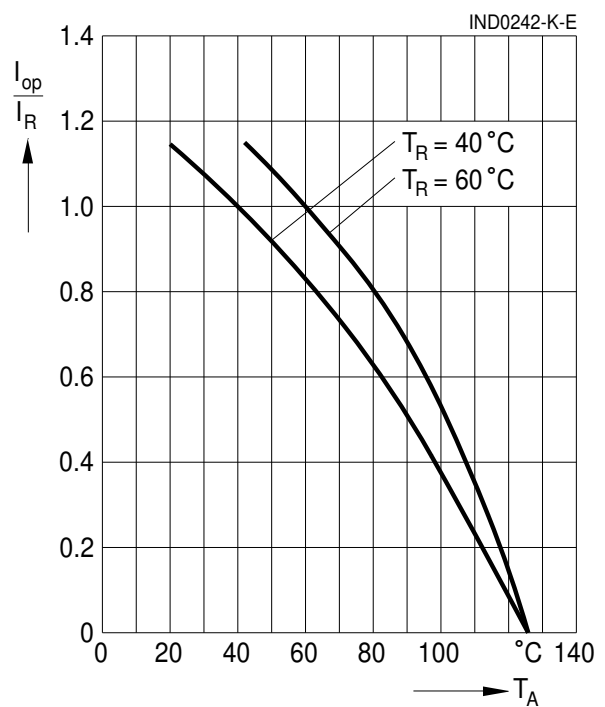
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**Impedance  $|Z|$  versus frequency  $f$**   
measured with windings in parallel at 20 °C,  
typical values



**Current derating  $I_{op}/I_R$**   
**versus 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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