



Power line chokes

Current-compensated ring core double chokes
250 V AC, 0.5 ... 8 A, 0.45 ... 56 mH

Series/Type: B82723A/J

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Rated voltage 250 V AC




Rated current 0.5 A to 8 A

Rated inductance 0.45 mH to 56 mH

Construction

- Current-compensated ring core double choke
- Ferrite core with epoxy coating (UL 94 V-0)
- 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) and UL 1283
- UL¹⁾ and/or ENEC (VDE) approvals   
- RoHS-compatible

Applications

- Suppression of common-mode interferences
- Switch-mode power applications
- Electronic ballasts in lamps
- Power inverters

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.internal ID code)

Delivery mode

- Blister tray in cardboard box



B82723A

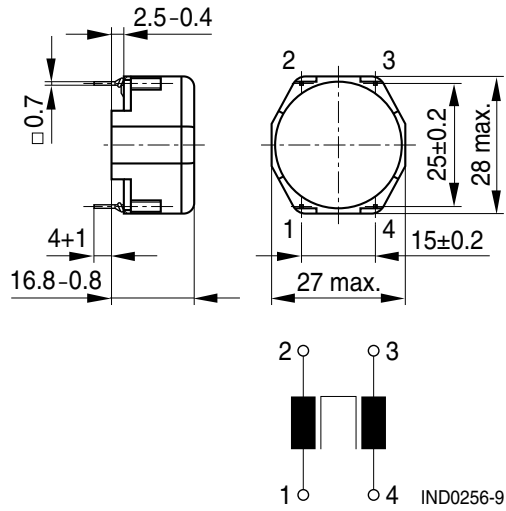


B82723J

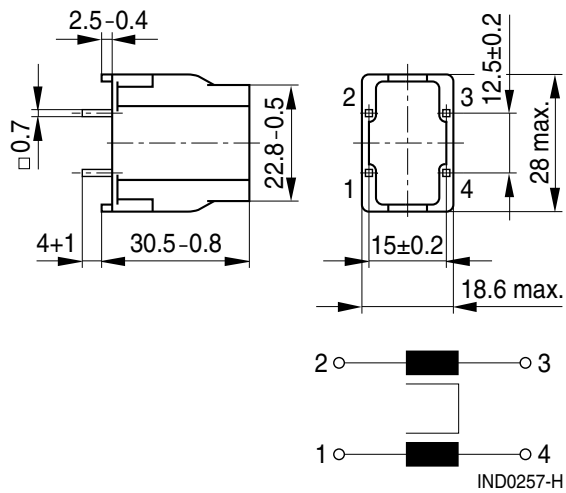
1) UL approval with 300 V AC

Dimensional drawings and pin configurations

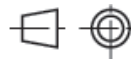
Horizontal version (B82723A)



Vertical version (B82723J)





Tolerances to ISO 2768-C unless otherwise noted.
Dimensions in mm.



Technical data and measuring conditions

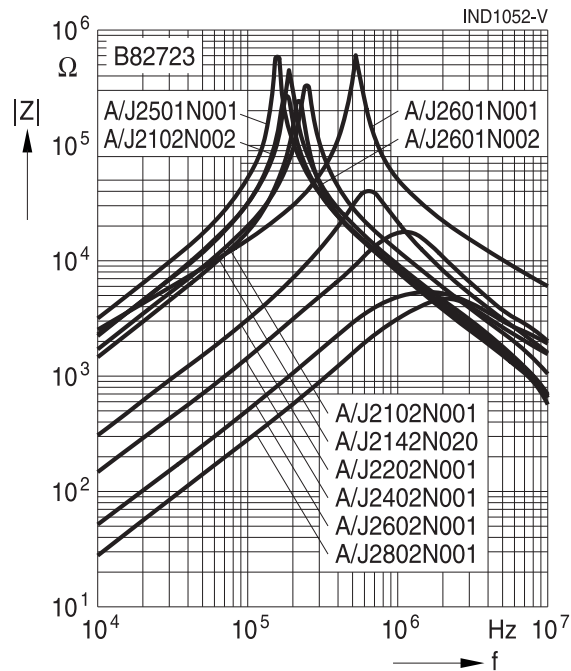
Rated voltage V_R	250 V AC (50/60 Hz)
Test voltage V_{test}	1500 V AC, 2 s (line/line)
Rated temperature T_R	+40 °C / +60 °C / +70 °C / +80 °C
Rated current I_R	Referred to 50 Hz and rated temperature
Rated inductance L_R	Measured with Agilent 4284A at 0.1 mA, 20 °C Measuring frequency: $L_R \leq 1 \text{ mH} = 100 \text{ kHz}$ $L_R > 1 \text{ mH} = 10 \text{ kHz}$ 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_{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

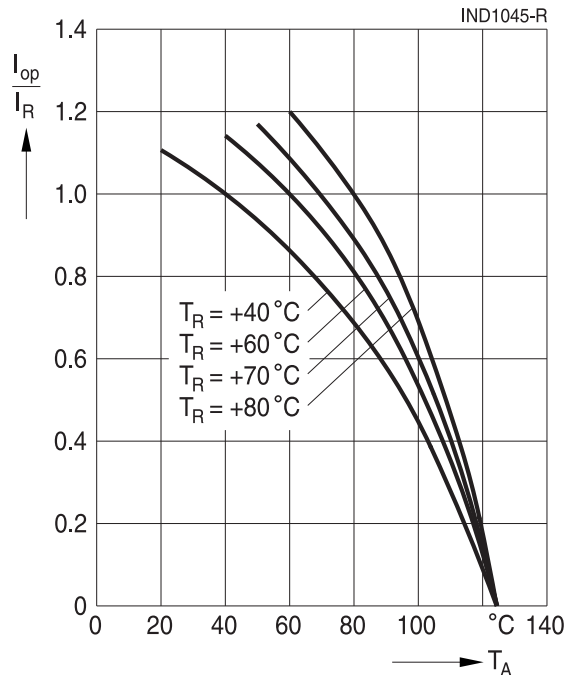
I_R A	L_R mH	$L_{stray,typ}$ μ H	R_{typ} m Ω	T_R $^{\circ}$ C	Ordering code		Approvals	
					Horizontal version	Vertical version		
0.5	56	800	2100	+60	B82723A2501N001	B82723J2501N001	×	×
0.6	47	650	1650	+70	B82723A2601N001	B82723J2601N001	–	–
0.6	39	430	1100	+60	B82723A2601N002	–	–	×
0.6	39	430	1100	+60	–	B82723J2601N002	–	–
1.0	39	430	750	+40	B82723A2102N002	B82723J2102N002	×	×
1.0	27	440	750	+60	B82723A2102N001	B82723J2102N001	×	×
1.4	27	270	440	+40	B82723A2142N020	B82723J2142N020	×	×
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	B82723J2602N001	×	×
8.0	0.45	5	11	+80	B82723A2802N001	B82723J2802N001	–	–

× = approval granted

Impedance $|Z|$ versus frequency f
measured with windings in parallel at +20 $^{\circ}$ C,
typical values



Current derating I_{op}/I_R
versus ambient temperature T_A



Cautions and warnings

Current-compensated ring core double chokes

- 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. Derating must be applied in the case the ambient temperature in application exceeds the rated temperature of the component.
 - Ensure the operation temperature of the component in application, which is the sum of the ambient temperature and the temperature rise owing to losses ("self-heating"), not to exceed the maximum value specified in the climatic category.
 - 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.

Important notes

Current-compensated ring core double chokes

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