



Power line chokes

Current-compensated frame core double chokes
250 V AC, 0.7 ... 2.3 A, 10 ... 100 mH, +40 °C

Series/Type: B82733F
Date: March 2011

Rated voltage 250 V AC

Rated current 0.7 A to 2.3 A


Rated inductance 10 mH to 100 mH

Construction

- Current-compensated frame core double choke
- Closed magnetic circuit with frame construction made of ferrite
- Pet coil former (UL94 V-0)
- 4-section winding with direct winding on the core
- Sector winding
- Clearance and creepage distances >3 mm



Features

- High inductance with low resistance
- Approx. 2% stray inductance for symmetrical interference suppression
- High pulse-handling capability
- Very good inductance/rated current ratio
- Low height (14 mm)
- Suitable for wave soldering
- Design complies with EN 60938-2 (VDE 0565-2) and UL 1283
- ENEC (VDE) and UL¹ approval 
- RoHS-compatible

¹ UL approval with 300 V AC

Applications

- Suppression of common-mode and differential-mode interferences
- Electronic ballasts for lamps
- High power switch-mode power supplies for consumer electronics

Terminals

- Base material CP wire
- Layer composition Ni, Sn
- Hot dipped
- Pins 0.7 × 0.7 mm
- Lead spacing 20 × 22.5 mm

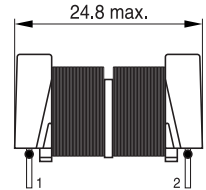
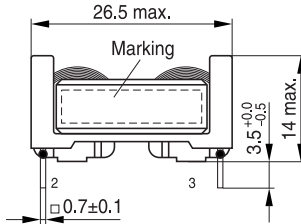
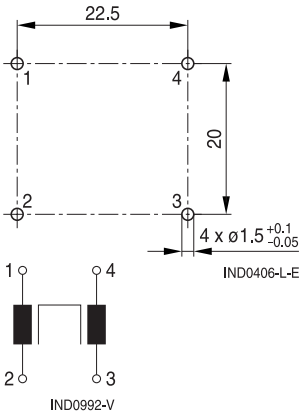
Marking

Manufacturer, date of manufacture (YYWW), factory identification code, ordering code, approval signs

Delivery mode

Polystyrene tray, anti-static, in cardboard box

Dimensional drawing and layout recommendation

 Layout recommendation
(top view)




IND0405-5-E

Dimensions in mm

Technical data and measuring conditions

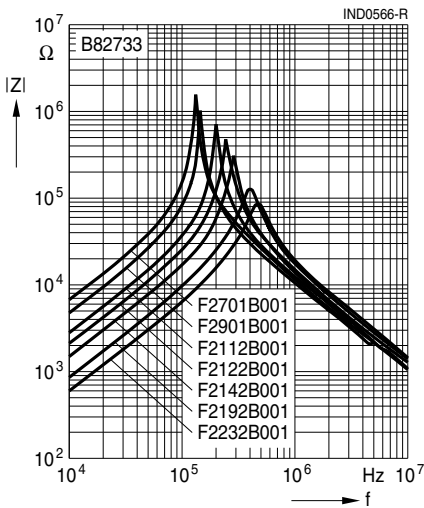
Rated voltage V_R	250 V AC (50/60 Hz)
Test voltage V_{test}	1500 V AC, 2 s (line/line)
Rated temperature T_R	+40 °C
Rated current I_R	Referred to 50 Hz and rated temperature
Rated inductance L_R	Measured with Agilent 4284A at 10 kHz, 0.1 mA, +20 °C. Inductance is specified per winding.
Inductance tolerance	-30/+50% 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. 18 g
Approvals	EN 60938-2, UL 1283

Characteristics and ordering codes

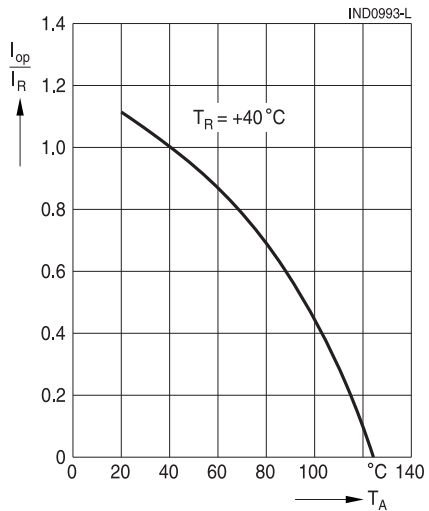
I_R A	L_R mH	$L_{\text{stray,typ}}$ μH	R_{typ} $\text{m}\Omega$	Ordering code	Approvals	
						
0.7	100	2100	1810	B82733F2701B001	×	×
0.9	68	1440	1100	B82733F2901B001	×	×
1.1	47	970	804	B82733F2112B001	×	×
1.2	39	800	696	B82733F2122B001	×	×
1.4	27	530	440	B82733F2142B001	×	×
1.9	15	310	279	B82733F2192B001	×	×
2.3	10	200	188	B82733F2232B001	×	×

× = approval granted

Impedance $|Z|$ versus frequency f
measured with windings in parallel 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. Derating must be applied in case the ambient temperature in the application exceeds the rated temperature of the component.
 - Ensure the operation temperature (which is the sum of the ambient temperature and the temperature rise caused by losses / self-heating) of the component in the application does not 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.

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