Power line chokes

Current-compensated ring core triple chokes
690/400 V AC, 62 A (+40 °C) / 48 A (+70 °C), 1.1 mH

Series/Type: **B82748S6623N030**

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Current-compensated ring core triple chokes



Rated voltage 690 / 400 V AC
Rated current 62 A (+40°C), 48 A (+70 °C)
Nominal inductance 1.1 mH

Construction

- Current-compensated ring core triple choke
- Ferrite core with epoxy coating (UL 94-V0)
- Additional PET core insulation
- Plastic base plate with integrated spacer (UL 94 V-0)[1)]
- Glue
- Sector winding
- Clearance ≥ 5.5 mm, creepage distances ≥ 6.3 mm

Features

- Approx. 0.8% stray inductance
  for symmetrical interference suppression
- Suitable for wave soldering
- Design complies with EN 60938-2 (VDE 0565-2)
- UL 1446 class 155(F) electrical insulation system c𝐑us
- RoHS-compatible

Applications

- Suppression of common-mode interferences
- Switch-mode applications

Terminals

- Ends of winding wires
- Hot-dip tinned

Marking

Product brand (EPCOS), electrical insulation system designation c𝐑us,
ordering code, rated current, rated voltage, nominal inductance,
date of manufacture (YYWWD.internal ID code), production place identification code

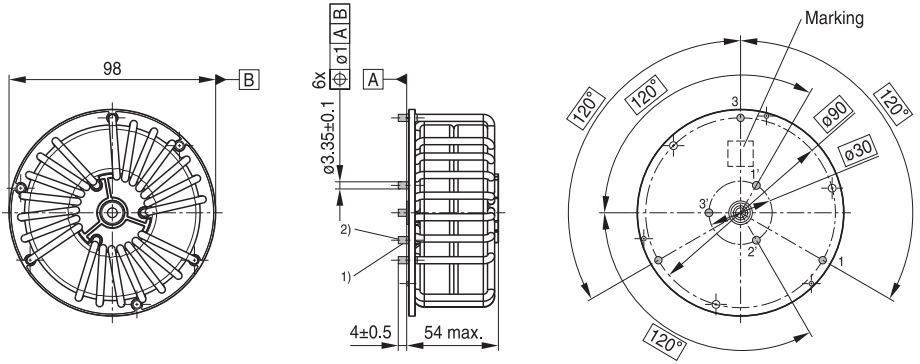
Delivery mode

Cardboard box with foam filler

1) Additionally certified values:

Glow wire flammability index (GWFI to IEC 60695-2-12):	+850 °C
Glow wire ignition temperature (GWIT to IEC 60695-2-13):	+775 °C
Comparative tracking index (CTI to IEC 60112):	175 V
Ball pressure test (BP to IEC 60695-10-2):	+125 °C

Dimensional drawing and pin configuration



[1] Terminals solderable with Sn tinned
[2] Tin tip permissible

Dimensions in mm

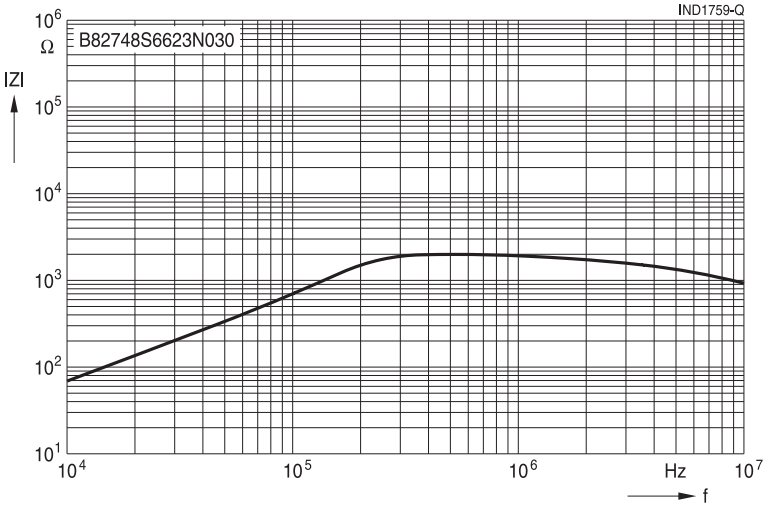
Technical data and measuring conditions

Rated voltage V_R	690/400 V AC (50/60 Hz)
Test voltage V_{test}	2000 V AC / 2800 V DC, 2 s (line/line)
Rated temperature T_R	+40 °C
Rated current I_R	Referred to 50 Hz and rated temperature
Rated current at +70 °C $I_{R,70}$	Referred to 50 Hz and +70 °C ambient temperature
Nominal inductance L_N	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 value
DC resistance R_{typ}	Measured at +20 °C, typical value, specified per winding
Solderability (lead-free)	Sn96.5Ag3.0Cu0.5: +(245 ±3) °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. 780 g
Approvals	UL 1446 class 155(F) T-EIS-CF1 (E320370)

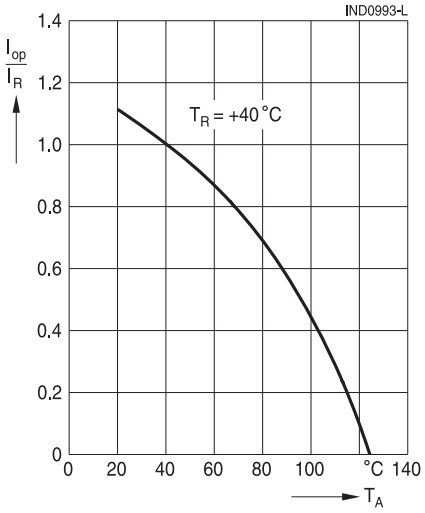
Characteristics and ordering code

I_R A	$I_{R,70}$ A	L_R mH	$L_{stray,typ}$ µH	R_{typ} mΩ	Ordering code
62	48	1.1	9	1.6	B82748S6623N030

Impedance |Z| versus frequency f
measured with windings in parallel at +20 °C, typical value



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.
  Washing processes may damage the product due to the possible static or cyclic mechanical loads (e.g. ultrasonic cleaning). They may cause cracks to develop on the product and its parts, which might lead to reduced reliability or lifetime.
- 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, wire insulation, plastics or glue.
  - The effect of the potting material can change the high-frequency behaviour of the components.
  - Many coating materials have a negative effect (chemically and mechanically) on the winding wires, insulation materials and connecting points. Customers are always obligated to determine whether and to what extent their coating materials influence the component.
    Customers are responsible and bear all risk for the use of the coating material. TDK Electronics does not assume any liability for failures of our components that are caused by the coating material.
- Ceramics / 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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2. We also point out that **in individual cases, a malfunction of electronic components or failure before the end of their usual service life cannot be completely ruled out in the current state of the art, even if they are operated as specified.** In customer applications requiring a very high level of operational safety and especially in customer applications in which the malfunction or failure of an electronic component could endanger human life or health (e.g. in accident prevention or life-saving systems), it must therefore be ensured by means of suitable design of the customer application or other action taken by the customer (e.g. installation of protective circuitry or redundancy) that no injury or damage is sustained by third parties in the event of malfunction or failure of an electronic component.

3. **The warnings, cautions and product-specific notes must be observed**.

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