

Power line chokes

Current-compensated ring core triple chokes
520/300 V AC, 1.3 mH, 20 A, +60 °C

Series/Type: **B82747S4203A020**

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Current-compensated ring core triple chokes

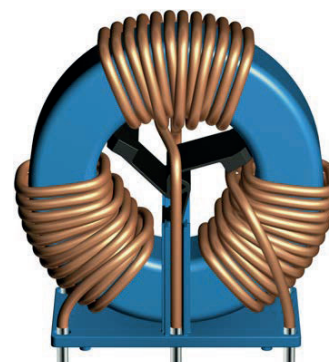
Rated voltage 520 / 300 V AC

Rated current 20 A / +60 °C

Nominal inductance 1.3 mH

Construction

- Current-compensated ring core triple choke
- Ferrite core with epoxy coating (UL 94 V-0)
- Plastic base plate (UL 94 V-0)¹⁾
- Plastic spacer (UL 94 V-0)
- Sector winding
- Clearance distances ≥ 5.3 mm



Features

- High resonance frequency
- Approx. 1% stray inductance for differential-mode interference suppression
- Suitable for wave soldering
- Design complies with EN 60938-2 (VDE 0565-2)
- RoHS-compatible

Applications

- Suppression of common-mode interferences
- Switch-mode applications
- Frequency-variable drives

Terminals

- Ends of winding wires
- Hot-dip tinned

Marking

Product brand (EPCOS), ordering code, rated voltages, rated inductance, rated current, date of manufacture (YYWWD.internal ID code), production place identification code

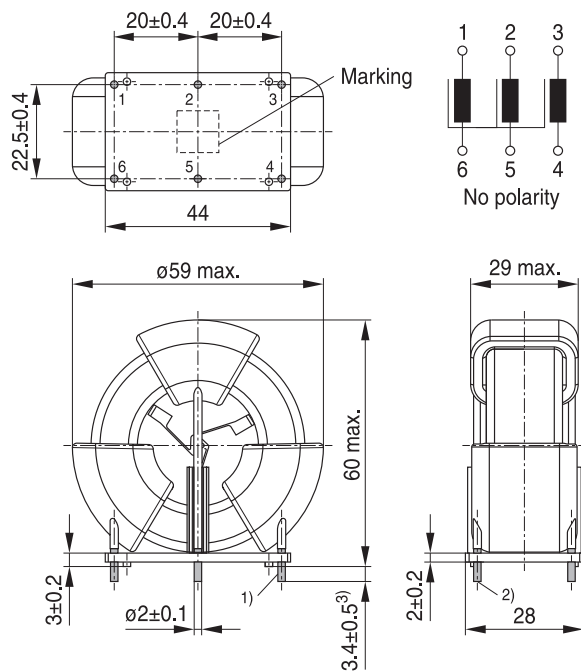
Delivery mode

- Cardboard box

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

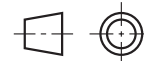
Dimensional drawing and pin configuration



- 1) Terminals solderable with Sn tinned
 2) Tin tip permissible
 3) Tin tip is not a part of this dimension

IND2024-3-E

Tolerances to ISO 2768-cl / ISO 8015.
 Size ISO 14405 (E)
 All dimensions in mm

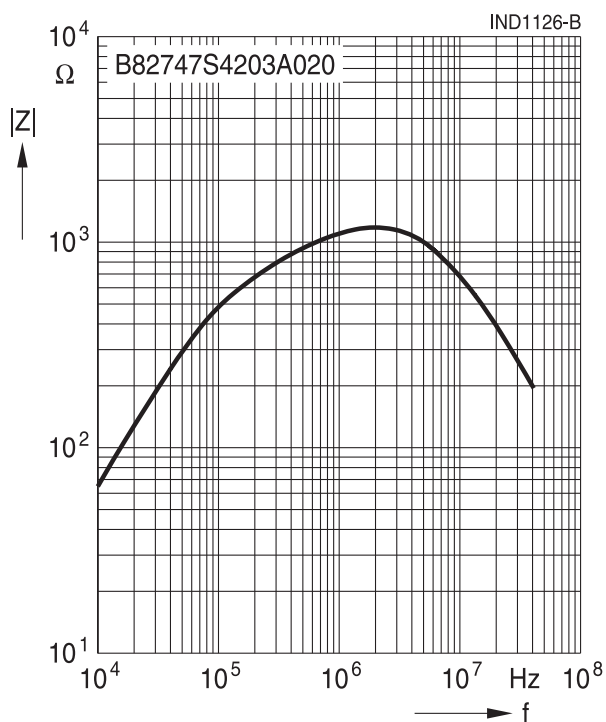


IND1245-O-E

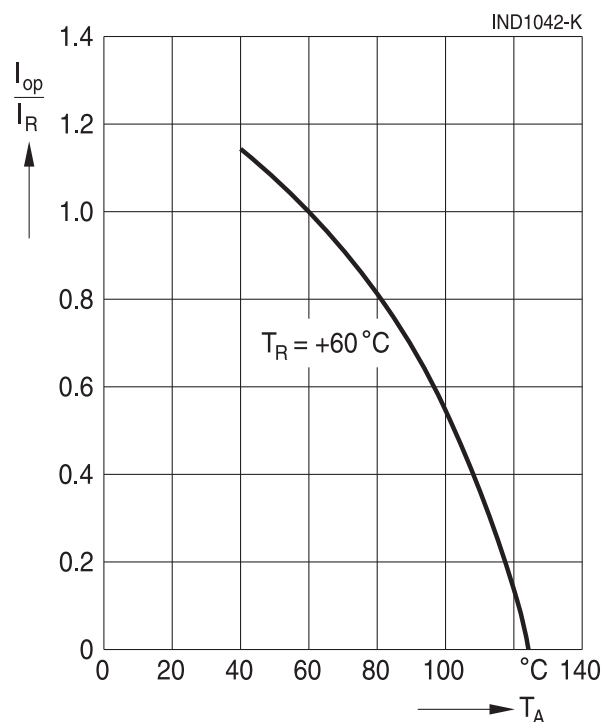
Technical data and measuring conditions

Rated voltage V_R	520/300 V AC (50/60 Hz)
Test voltage V_{test}	2800 V AC, 2 s (line/line)
Rated temperature T_R	+60 °C
Rated current I_R	20 A Referred to rated temperature
Nominal inductance L_N	1.3 mH 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 $L_{stray,typ}$	15 µH Measured with Agilent 4284A at 10 kHz, 5 mA, +20 °C, typical value
DC resistance R_{max}	5.2 mΩ Measured at +20 °C, maximum value, 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)
Pollution degree	P2 (to IEC 61558-1)
Storage conditions (packaged)	−25 °C ... +40 °C, ≤ 75% RH
Weight	Approx. 170 g

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
rated temperature $T_R = +60$ °C



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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