Power line chokes

Current-compensated ring core double chokes
600 V AC / 1000 V DC, 0.42 … 3.3 mH, 20 … 50 A, +70 °C

Series/Type: **B8272*E6**

Date: May 2015

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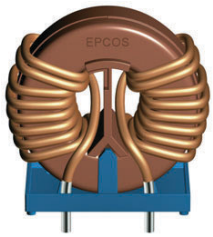
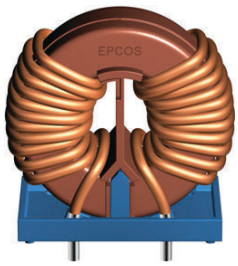
Current-compensated ring core double chokes

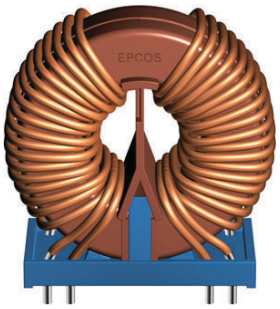
Rated voltage 600 V AC / 1000 V DC
Rated inductance 0.42 ... 3.3 mH
Rated current 20 ... 50 A / +70 °C



Size A



Size B



Size C

Construction

- Current-compensated ring core double choke
- Ferrite core
- Plastic core case incl. spacer (UL 94 V-0, CTI600)
- Plastic base plate (UL 94 V-0)
- Sector winding
- Clearance and creepage distances ≥8 mm

Features

- Insulation for high voltage applications
- Approx. 0.6 ... 0.8% stray inductance for symmetrical interference suppression
- Wide range of values due to 3 core sizes
- High rated current and rated temperature
- Suitable for wave soldering
- Design complies with EN 60938-2 (VDE 0565-2)
- UL 1446 class 155 (F) electrical insulation system
- Recyclable owing to omission of adhesives
- RoHS-compatible

Applications

- Suppression of common-mode interferences
- High-voltage switch-mode power applications
- Power inverters
- Frequency converters

Terminals

- Ends of winding wires
- Hot-dip tinned

Marking

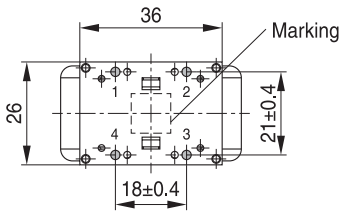
Product brand, electrical insulation system designation, ordering code, rated voltages, rated inductance, rated current, date of manufacture (YYWWD.internal ID code), production place identification code

Delivery mode

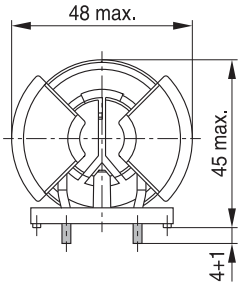
- Cardboard box

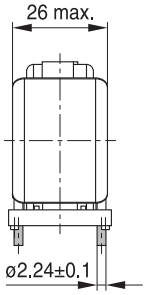
Dimensional drawings and pin configurations

Size A



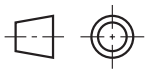
IND1159-A





IND1085-F-E

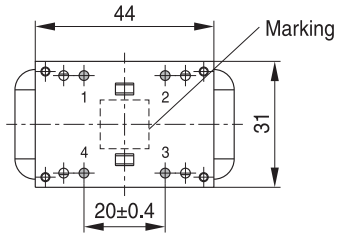
Tolerances to ISO 2768-cl / ISO 8015.
Size ISO 14405 Ⓔ
All dimensions in mm



IND1245-O-E

Size B

Version 1



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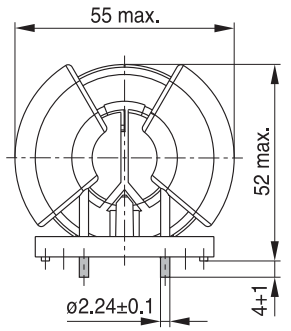
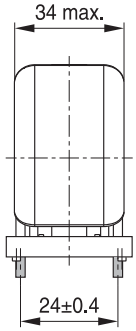
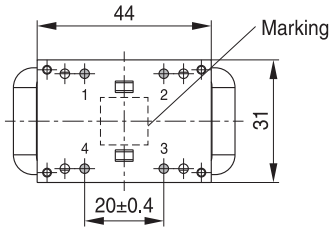
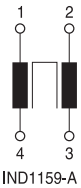




IND1086-L-E

Version 2





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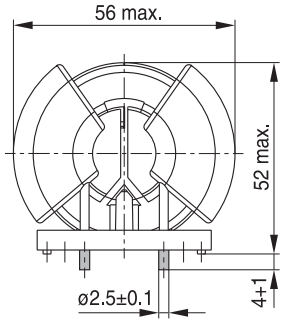
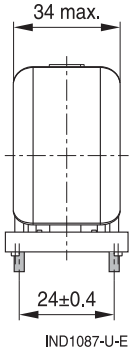
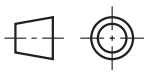




IND1087-U-E

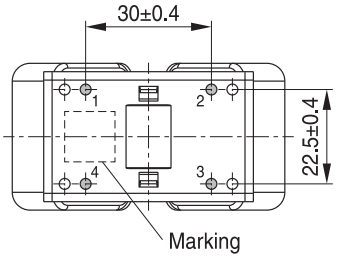
Tolerances to ISO 2768-cl / ISO 8015.
Size ISO 14405 Ⓔ
All dimensions in mm

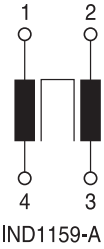


IND1245-O-E

Size C

Version 1





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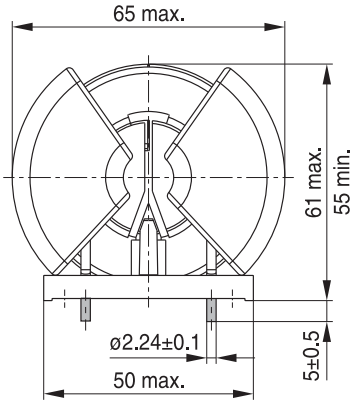
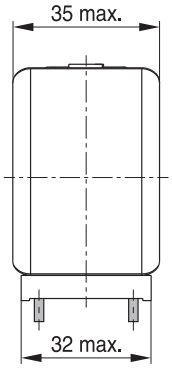
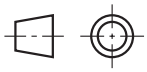




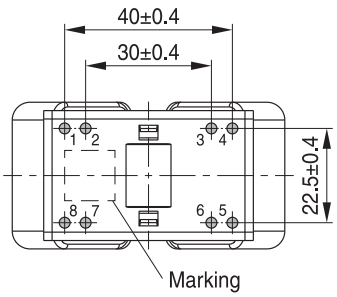
IND1088-G-E

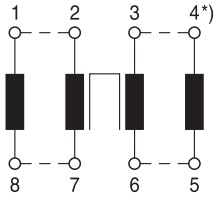
Tolerances to ISO 2768-cl / ISO 8015.
Size ISO 14405 Ⓔ
All dimensions in mm



IND1245-O-E

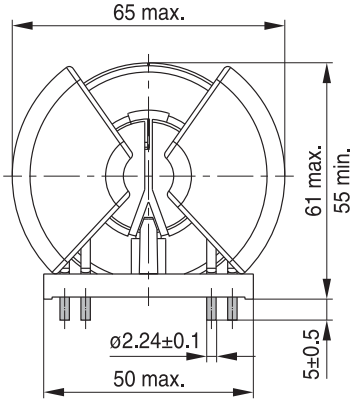
Version 2

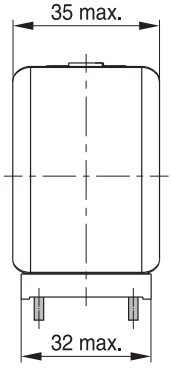




*) Parallel wires must be shorted in application!

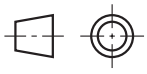
IND1160-B-E





IND1089-B-E

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



IND1245-O-E

Technical data and measuring conditions

Rated voltage V_R	600 V AC (50 / 60 Hz) 1000 V DC
Test voltage V_{test}	3500 V DC, 2 s (line/line) 500 V DC, 1 s (parallel wires)
Rated temperature T_R	+70 °C
Rated current I_R	Referred to 50 Hz and rated temperature (shorted parallel wires in application)
Rated inductance L_R	Measured with Agilent 4284A at 0.1 mA, +20 °C Measuring frequency: $L_R \leq 1$ mH: f = 100 kHz $L_R > 1$ mH: f = 10 kHz 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 5 mA, +20 °C, typical values Measuring frequency: $L_R \leq 1$ mH: f = 100 kHz $L_R > 1$ mH: f = 10 kHz
DC resistance R_{typ}	Measured at +20 °C, typical values, specified per winding and shorted parallel wires
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
Approvals	UL1446 Class 155 (F) (E320370)

Characteristics and ordering codes

Size A

$I_{R,+70\ °C}$ A	L_R mH	$L_{stray,typ}$ µH	R_{typ} mΩ	Weight approx. g	Ordering code
21	1.5	8.3	2.8	100	B82726E6213A040
24	1.0	5.7	2.3	90	B82726E6243A041
26	0.6	3.8	1.7	85	B82726E6263A040
29	0.44	2.9	1.5	80	B82726S6243A040[1)]

1) Alternative rating: 24 A at +85 °C

Size B

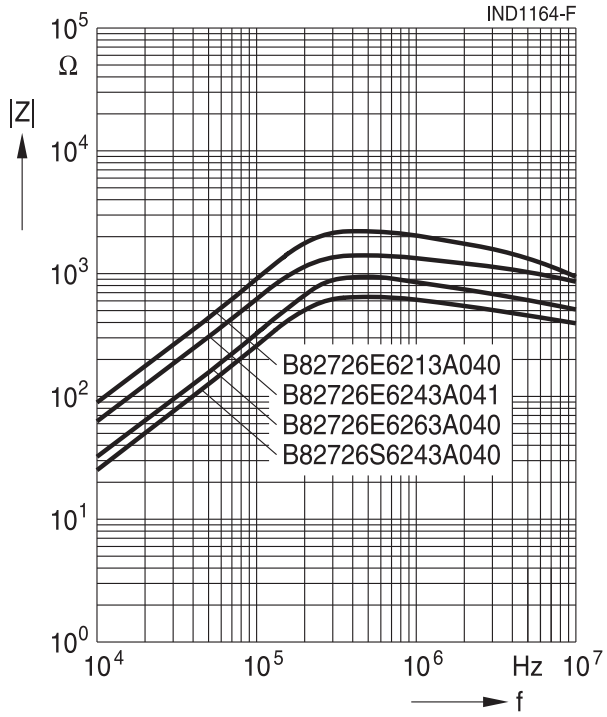
$I_{R,+70\ °C}$ A	L_R mH	$L_{stray,typ}$ µH	R_{typ} mΩ	Weight approx. g	Ordering code	Version 1	Version 2
20	2.7	19	4.4	155	B82726E6203B041	X	–
24	1.5	11	3.2	135	B82726S6203A040[1)]	X	–
28	1.0	7	2.1	140	B82726E6283B040	–	X
33	0.42	3.5	1.4	120	B82726E6333B040	–	X

1) Alternative rating: 20 A at +85 °C

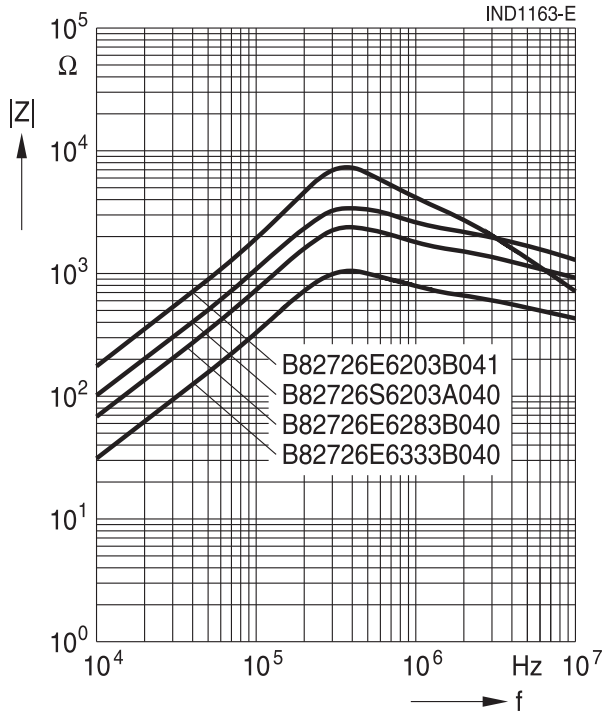
Size C

$I_{R,+70\ °C}$ A	L_R mH	$L_{stray,typ}$ µH	R_{typ} mΩ	Weight approx. g	Ordering code	Version 1	Version 2
22	3.3	20.0	4.6	210	B82727E6223A040	X	–
24	2.2	15.0	3.9	200	B82727E6243A040	X	–
40	1.5	9.0	1.7	245	B82727E6403A040	–	X
44	1.0	6.3	1.35	220	B82727E6443A040	–	X
50	0.57	3.7	1.0	200	B82727E6503A040	–	X

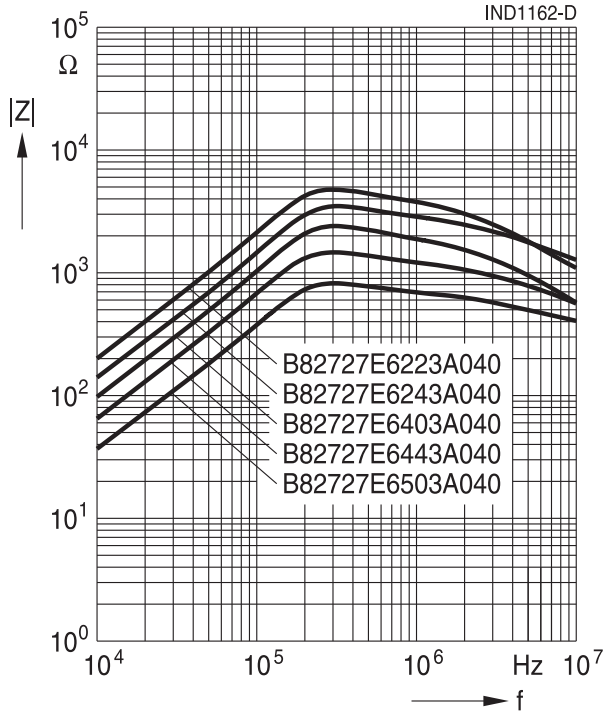
Impedance |Z| versus frequency f
measured with windings in parallel at +20 °C, typical values



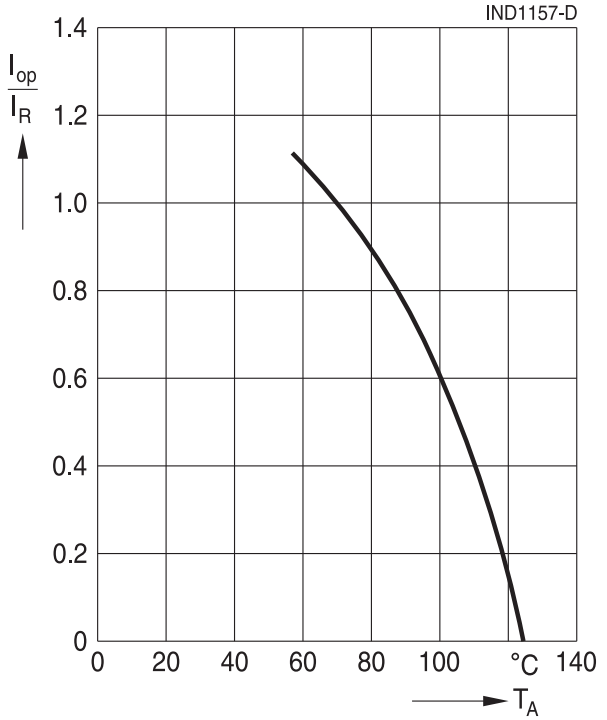
Impedance |Z| versus frequency f
measured with windings in parallel at +20 °C, typical values



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
rated temperature T_R = +70 °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 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.

Display of ordering codes for EPCOS products

The ordering code for one and the same product can be represented differently in data sheets, data books, other publications and the website of EPCOS, or in order-related documents such as shipping notes, order confirmations and product labels. **The varying representations of the ordering codes are due to different processes employed and do not affect the specifications of the respective products**. Detailed information can be found on the Internet under www.epcos.com/orderingcodes.

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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**.

4. In order to satisfy certain technical requirements, **some of the products described in this publication may contain substances subject to restrictions in certain jurisdictions (e.g. because they are classed as hazardous)**. Useful information on this will be found in our Material Data Sheets on the Internet (www.epcos.com/material). Should you have any more detailed questions, please contact our sales offices.

5. We constantly strive to improve our products. Consequently, **the products described in this publication may change from time to time**. The same is true of the corresponding product specifications. Please check therefore to what extent product descriptions and specifications contained in this publication are still applicable before or when you place an order.

   We also **reserve the right to discontinue production and delivery of products**. Consequently, we cannot guarantee that all products named in this publication will always be available. The aforementioned does not apply in the case of individual agreements deviating from the foregoing for customer-specific products.

6. Unless otherwise agreed in individual contracts, **all orders are subject to the current version of the "General Terms of Delivery for Products and Services in the Electrical Industry" published by the German Electrical and Electronics Industry Association (ZVEI)**.

7. The trade names EPCOS, Alu-X, CeraDiode, CeraLink, CeraPad, CeraPlas, CSMP, CSSP, CTVS, DeltaCap, DigiSiMic, DSSP, ExoCore, FilterCap, FormFit, LeaXield, MiniBlue, MiniCell, MKD, MKK, MotorCap, PCC, PhaseCap, PhaseCube, PhaseMod, PhiCap, PQSine, SIFERRIT, SIFI, SIKOREL, SilverCap, SIMDAD, SiMic, SIMID, SineFormer, SIOV, SIP5D, SIP5K, TFAP, ThermoFuse, WindCap are **trademarks registered or pending** in Europe and in other countries. Further information will be found on the Internet at www.epcos.com/trademarks.

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Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
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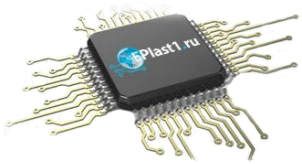
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

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