Data and signal line chokes

Common-mode chokes, ring core
0.2 … 6 mH, 100 mA, 60 °C

Series/Type: **B82791G14**

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Rated voltage 42 V AC/80 V DC
Rated inductance 0.2 mH to 6 mH
Rated current 100 mA



Construction

- Current-compensated ring core quad choke
- Ferrite core
- Polycarbonate case (UL 94 V-0)

Features

- Without potting
- Suitable for automatic insertion
- Suitable for wave soldering
- RoHS-compatible

Applications

Suppression of asymmetrical interference coupled in on data lines, already effective at 10 kHz, e.g. in:

- Telephone lines (analog, ISDN)
- Interfaces with balance-to-ground data transmission

Terminals

- Base material CuNi18Zn20
- Layer composition Ni, Sn
- Hot-dipped

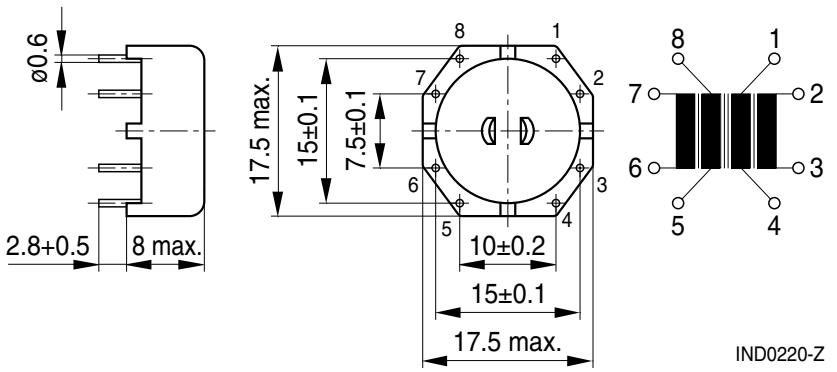
Marking

Manufacturer, ordering code, rated voltage, rated inductance, rated current, date of manufacture (MMYY)

Packing

Cardboard box

Dimensional drawing and pin configuration



Dimensions in mm

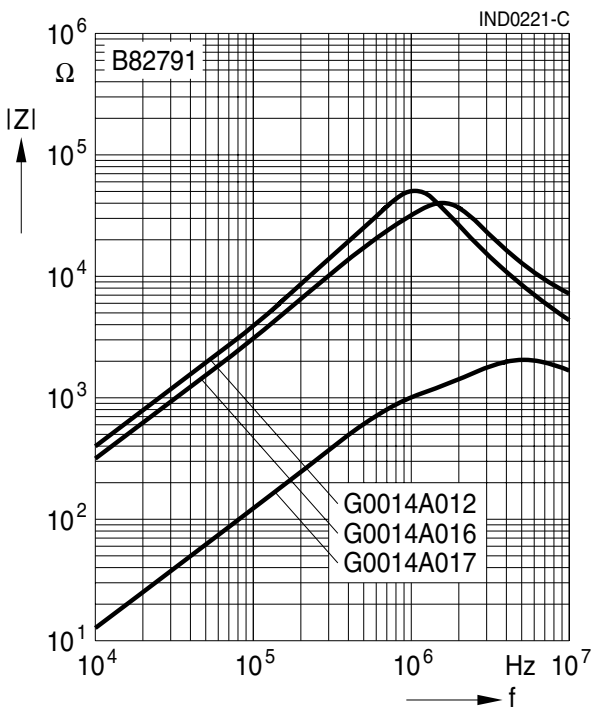
Technical data and measuring conditions

Rated voltage V_R	42 V AC (50/60 Hz) / 80 V DC
Rated temperature T_R	60 °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: $L_R \leq 1$ mH = 100 kHz $L_R > 1$ mH = 10 kHz 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 5 mA, 20 °C, typical values Measuring frequency: $L_R \leq 1$ mH = 100 kHz $L_R > 1$ mH = 10 kHz
DC resistance R_{typ}	Measured at 20 °C, typical values
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. 4 g

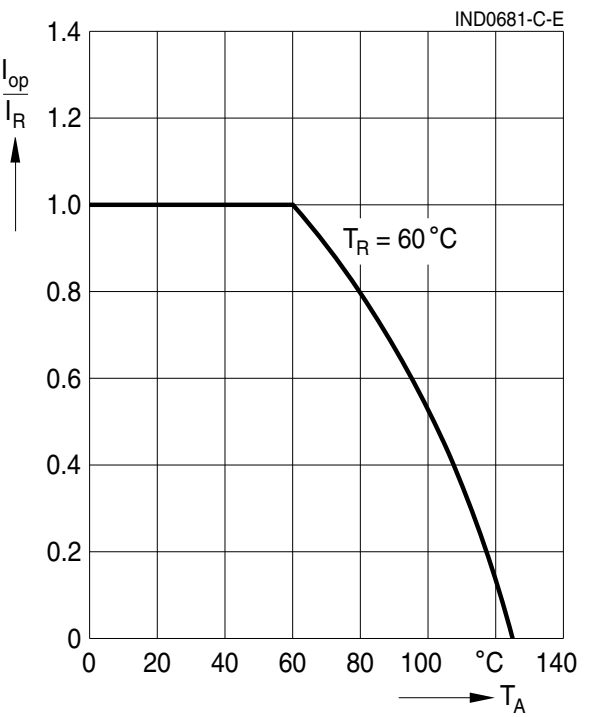
Characteristics and ordering codes

L_R mH	$L_{stray,typ}$ nH	I_R [1] mA	R_{typ} mΩ	V_{test} V DC, 2 s	Ordering code
0.2	150	100	300	750	B82791G0014A017
4.7	500	100	850	750	B82791G0014A016
6	800	100	1200	750	B82791G0014A012

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



Current derating I_{op}/I_R versus ambient temperature



1) Types with higher rated current on request.

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.
- 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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1. Some parts of this publication contain **statements about the suitability of our products for certain areas of application**. These statements are based on our knowledge of typical requirements that are often placed on our products in the areas of application concerned. We nevertheless expressly point out **that such statements cannot be regarded as binding statements about the suitability of our products for a particular customer application.**

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