



## Data and signal line chokes

Common-mode chokes, ring core  
2.2 ... 47 mH, 100 mA, 60 °C

**Series/Type:** B82791G15/H15

**Date:** October 2008

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**Rated voltage 42 V AC/80 V DC**  
**Rated inductance 2.2 mH to 47 mH**  
**Rated current 100 mA**

### Construction

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

### Features

- Without potting
- Vertical or horizontal version
- Suitable for wave soldering
- RoHS-compatible

### Application

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

- Telephone lines (analog, ISDN)
- Interfaces with symmetrical data transmission
- Building services automation (EIB bus)
- Automation engineering

### Terminals

- Base material CuNi18Zn20
- Layer composition Ni, Sn
- Hot-dipped
- Lead spacing 12.7 × 7.4 (mm) or 10 × 15 (mm)

### Marking

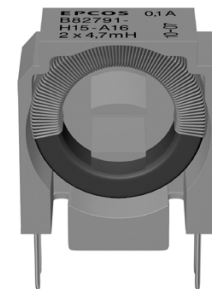
Manufacturer, ordering code, rated inductance, rated current, graphic symbol (for B82791G15), date of manufacture (MMYY)

### Delivery mode

Cardboard box



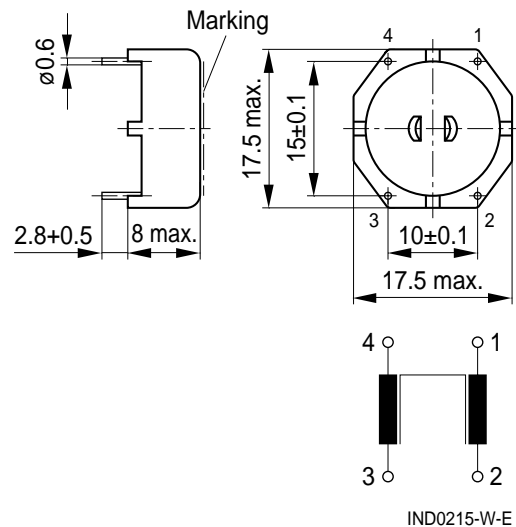
B82791G15



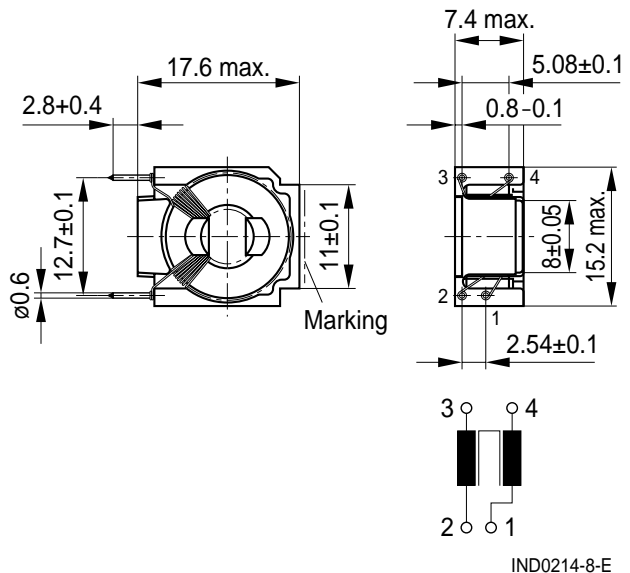
B82791H15

**Dimensional drawings and pin configurations**

Horizontal version (B82791G15)



Vertical version (B82791H15)



Tolerances to ISO 2768-M unless otherwise noted.

Dimensions in mm

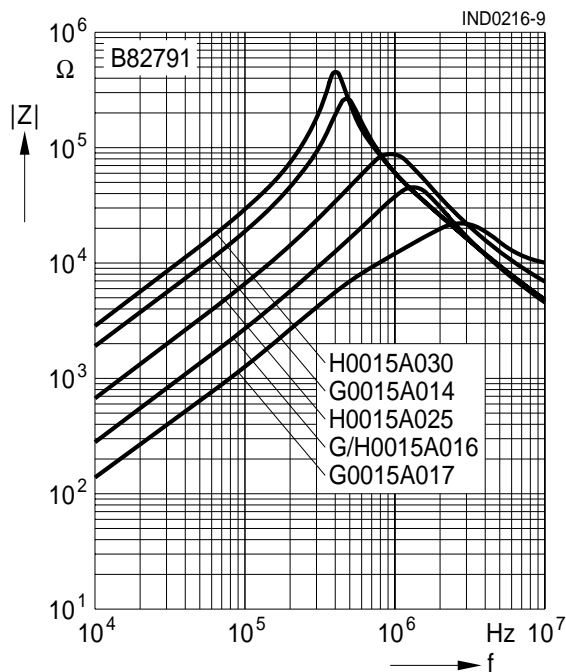
**Technical data and measuring conditions**

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 10 kHz, 0.1 mA, 20 °C Inductance is specified per winding.
Inductance tolerance	$\pm 30\%$ at 20 °C B82791H0015A016: $-25/+35\%$ at 20 °C
Inductance decrease $\Delta L/L_0$	$< 10\%$ at DC magnetic bias with $I_R$ , 20 °C
Stray inductance $L_{\text{stray,typ}}$	Measured with Agilent 4275A at 10 kHz, 5 mA, 20 °C, typical values
DC resistance $R_{\text{typ}}$	Measured at 20 °C, typical values, specified per winding
Solderability (lead-free)	Sn96.5Ag3.0Cu0.5: (245 $\pm$ 5) °C, (3 $\pm$ 0.3) s Wetting of soldering area $\geq 95\%$ (to IEC 60068-2-20, test Ta)
Resistance to soldering heat (wave soldering)	(260 $\pm$ 5) °C, (10 $\pm$ 1) s (to IEC 60068-2-20, test Tb)
Climatic category	40/125/56 (to IEC 60068-1)
Storage conditions (packaged)	$-25 \text{ °C} \dots +40 \text{ °C}$ , $\leq 75\% \text{ RH}$
Weight	Approx. 3 g

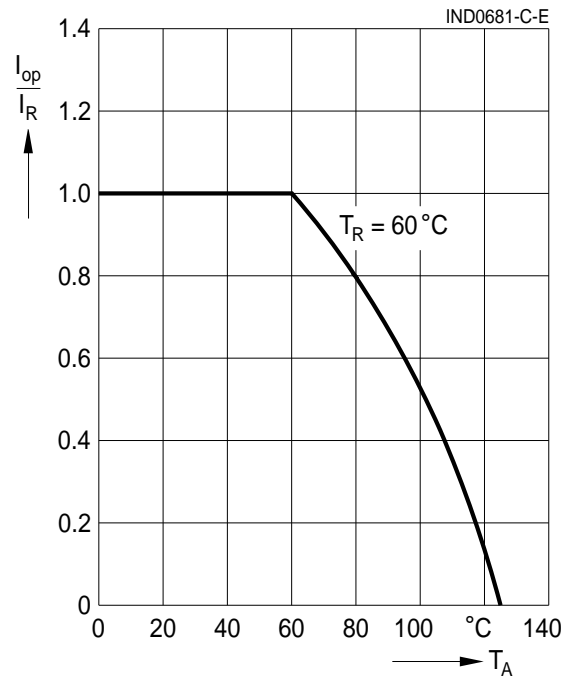
**Characteristics and ordering codes**

$L_R$ mH	$L_{\text{stray,typ}}$ nH	$I_R$ mA	$R_{\text{typ}}$ m $\Omega$	$V_{\text{test}}$ V DC, 2 s	Ordering code	
					horizontal version	vertical version
2.2	500	100	300	1200	B82791G0015A017	—
4.7	900	100	850	1200	B82791G0015A016	B82791H0015A016
10	1200	100	1200	1200	—	B82791H0015A025
38	3300	100	5000	750	B82791G0015A014	—
47	2100	100	5100	750	—	B82791H0015A030

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



**Current derating  $I_{\text{op}}/I_R$**   
**versus ambient temperature**



## 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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