



## 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, October 2011

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 10 × 15 (mm) or 12.7 × 5.08/2.54 (mm)

### Marking

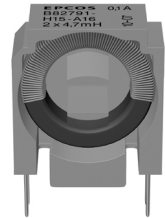
Manufacturer, ordering code, rated inductance, rated current, graphic symbol (for B82791G15), date of manufacture (MMYY)

### Delivery mode

Cardboard box



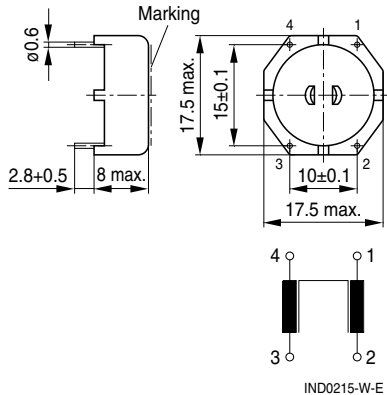
B82791G15



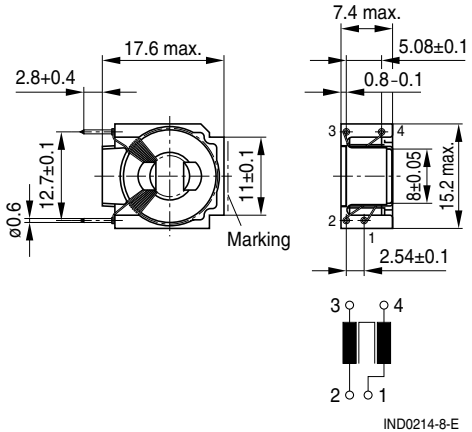
B82791H15

**Dimensional drawings and pin configurations**

Horizontal version (B82791G15)



Vertical version (B82791H15)


 Tolerances to ISO 2768-M unless otherwise noted.  
 Dimensions in mm.

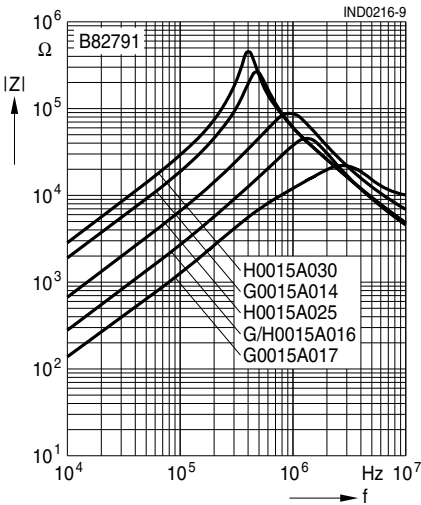
**Technical data and measuring conditions**

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	±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, typ. values, 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)
Storage conditions (packaged)	-25 °C ... +40 °C, ≤ 75% RH
Weight	Approx. 3 g

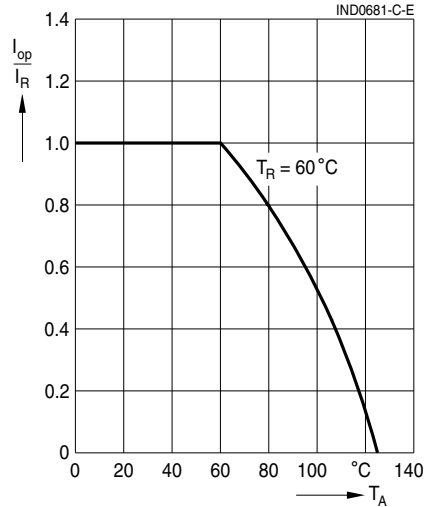
**Characteristics and ordering codes**

$L_R$ 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

### Current-compensated ring core double chokes

- 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. Derating must be applied in the case the ambient temperature in application exceeds the rated temperature of the component.
  - Ensure the operation temperature of the component in application, which is the sum of the ambient temperature and the temperature rise owing to losses ("self-heating"), not to exceed the maximum value specified in the climatic category.
  - 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.

## Important notes

### Current-compensated ring core double chokes

The following applies to all products named in this publication:

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**. As a rule, EPCOS is either unfamiliar with individual customer applications or less familiar with them than the customers themselves. For these reasons, it is always ultimately incumbent on the customer to check and decide whether an EPCOS product with the properties described in the product specification is suitable for use in a particular customer application.
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 a passive 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 a passive electronic component.
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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.

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