



## Power line chokes

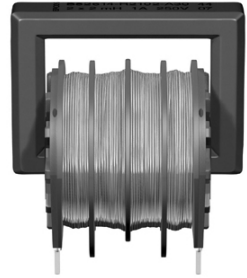
Sine-wave chokes

250 V AC, 0.8 ... 2.7 A, 0.5 ... 3.0 mH

**Series/Type:**            **B82614**

**Date:**                    **March 2008**

**Rated voltage 250 V AC**  
**Rated current 0.8 A to 2.7 A**  
**Rated inductance 0.5 mH to 3.0 mH**



### Construction

- Single choke
- Air gapped rectangular ferrite core
- Closed polycarbonate coil former (UL 94 V-0)
- Without encapsulation
- 4-section winding

### Features

- High resonance frequency due to 4-section winding
- Low saturation effects due to gapped core
- Suitable for wave soldering
- Design complies with EN 60938-2 (VDE 0565-2)
- Recyclable owing to omission of encapsulation and glue
- RoHS-compatible

### Applications

- Switch-mode power supplies with current pump
- Output filter in switch-mode applications
- Reduction of harmonics and PFC

### Terminals

- Base material CuNi18Zn20
- Layer composition Ni, Sn
- Hot-dipped
- Pins 0.7 × 0.7 (mm)
- Lead spacing 12.5 × 15 (mm)

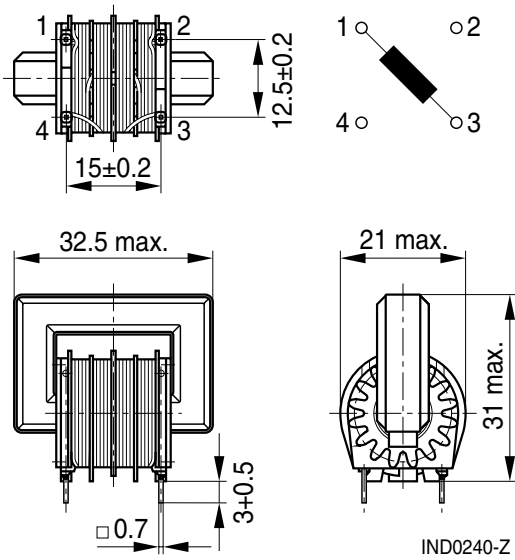
### Marking

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

### Delivery mode

Blister tray in cardboard box

Dimensional drawing and pin configuration



Dimensions in mm

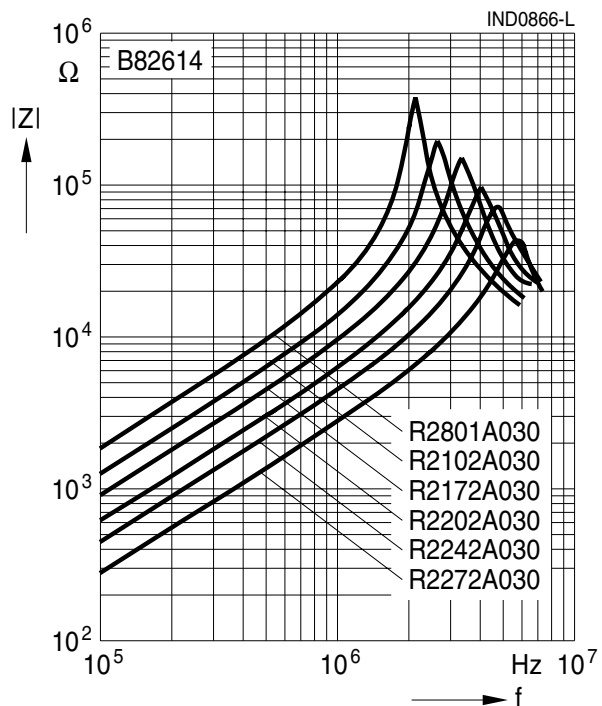
**Technical data and measuring conditions**

Rated voltage $V_R$	250 V AC (50/60 Hz)
Rated temperature $T_R$	40 °C
Rated current $I_R$	Referred to 50 Hz and rated temperature
Rated inductance $L_R$	Defined at zero DC current bias Measured with Agilent 4284A at 0.1 mA, 20 °C Measuring frequency: $L_R \leq 1 \text{ mH} = 100 \text{ kHz}$ $L_R > 1 \text{ mH} = 10 \text{ kHz}$
Inductance tolerance	$\pm 30\%$ at 20 °C
Inductance at rated current	Measured at DC magnetic bias with $I_R$ with Agilent 4284A at 0.1 mA, 20 °C, typical values Measuring frequency: $L_R \leq 1 \text{ mH} = 100 \text{ kHz}$ $L_R > 1 \text{ mH} = 10 \text{ kHz}$
DC resistance $R_{typ}$	Measured at 20 °C, typical values
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 °C ... +40 °C, $\leq 75\%$ RH
Weight	Approx. 30 g

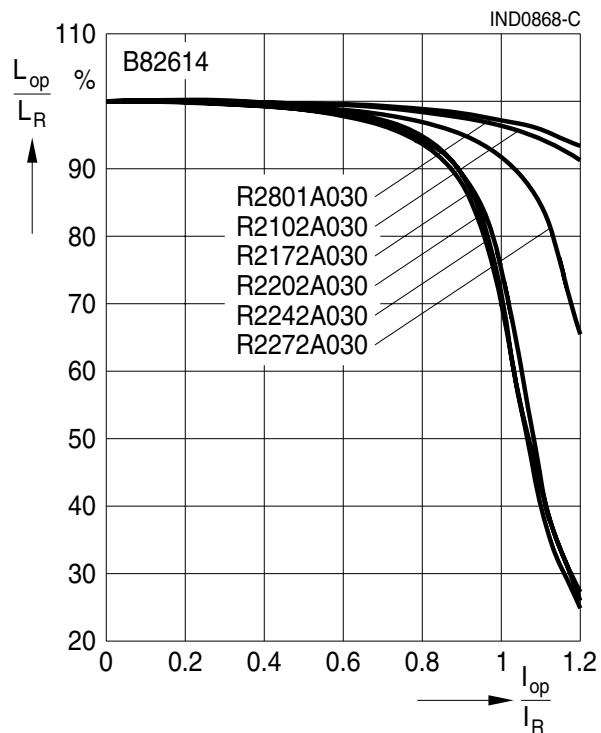
**Characteristics and ordering codes**

$I_R$ A	$L_R$ mH	L at $I_R$ , typ. mH	$R_{typ}$ $\Omega$	Ordering code
0.8	3.0	2.9	1.9	B82614R2801A030
1.0	2.0	1.9	1.3	B82614R2102A030
1.7	1.5	0.95	0.61	B82614R2172A030
2.0	1.0	0.75	0.43	B82614R2202A030
2.4	0.75	0.50	0.33	B82614R2242A030
2.7	0.5	0.42	0.23	B82614R2272A030

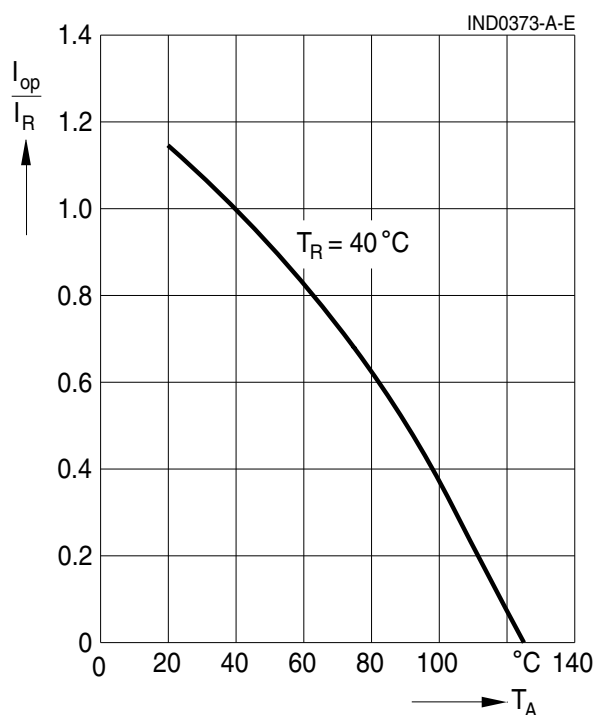
**Impedance  $|Z|$  versus frequency  $f$**   
measured at 20 °C, typical values



**Relative inductance  $L_{op}/L_R$  versus relative current  $I_{op}/I_R$**   
measured at 20 °C, typical values



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



## 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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