



SMT power inductors

Low profile
Size 3.8 x 3.6 x 1.2 (mm)

Series/Type: **B82469G1**
Date: February 2008

SMT power inductors

B82469G1

Size 3.8 × 3.6 × 1.2 (mm)

Preliminary data

Rated inductance 0.39 µH to 22 µH

Rated current 0.53 A to 2.8 A



Construction

- Magnetically shielded
- Special ferrite core shape
- Winding: enamel copper wire
- Winding welded to terminals

Features

- Low profile
- High rated current
- Low DC resistance
- Suitable for lead-free reflow soldering
- RoHS-compatible

Applications

- Filtering of supply voltages
- Coupling, decoupling
- DC/DC converters
- Handheld devices
- EDP (Electronic Data Processing)
- Consumer electronics

Terminals

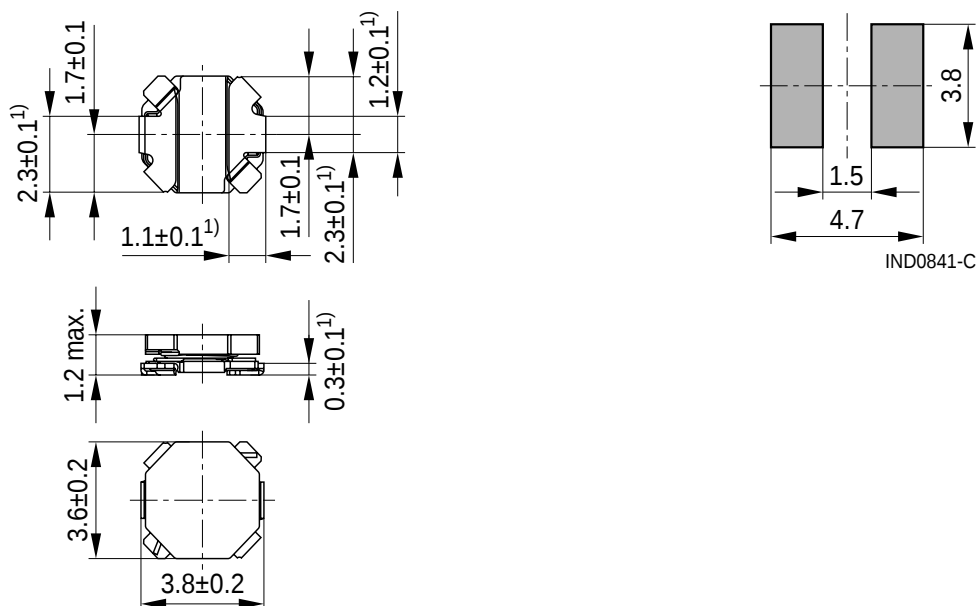
- Base material CuSn₆P
- Layer composition Ni, Sn (lead-free)
- Electro-plated

Marking

- Marking on component: To be defined
- Minimum data on reel:
Manufacturer, ordering code, L value,
quantity, date of packing

Delivery mode and packing unit

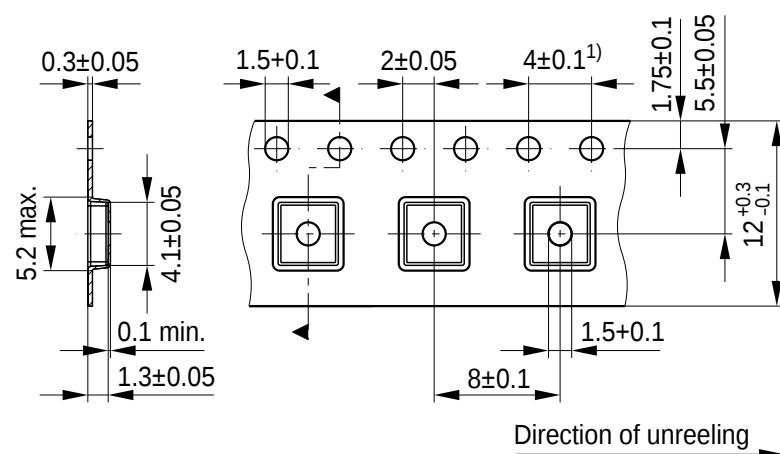
- 12-mm blister tape, wound on 180-mm Ø reel
- Packing unit: 1000 pcs./reel

Preliminary data
Dimensional drawing and layout recommendation


1) Soldering area

IND0840-Z-E

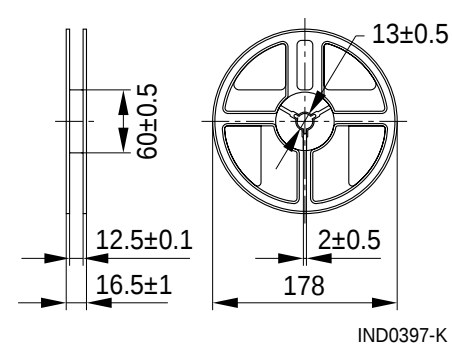
Dimensions in mm

Taping and packing
Blister tape


1) Limit tolerance over 10 pitches ±0.2

IND0833-N-E

Dimensions in mm

Reel


SMT power inductors
B82469G1
Size 3.8 × 3.6 × 1.2 (mm)
Preliminary data
Technical data and measuring conditions

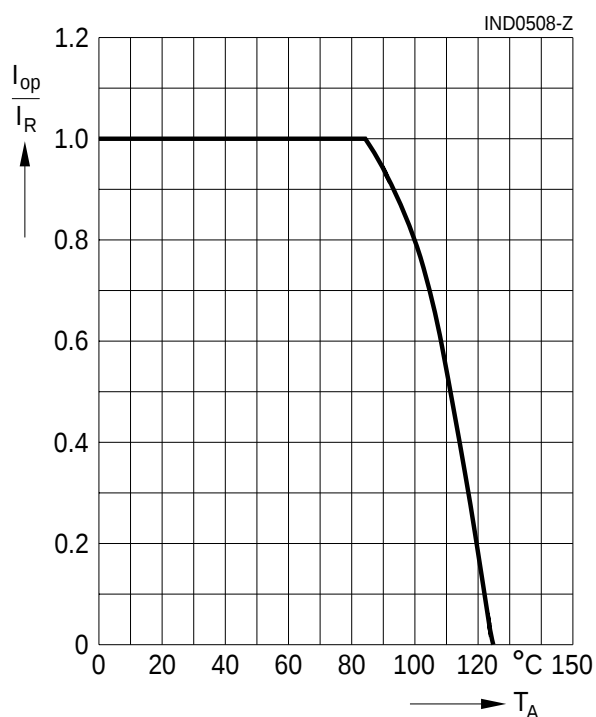
Rated inductance L_R	Measured with LCR meter Agilent 4284A at frequency f_L , 0.1 V, 20 °C
Rated temperature T_R	85 °C
Rated current I_R	Max. permissible DC with temperature increase of ≤ 40 K at rated temperature
Saturation current $I_{sat,typ}$	Max. permissible DC with inductance decrease $\Delta L/L_0$ of approx. 30%, typical values
DC resistance R_{typ}	Measured at 20 °C, typical values
Solderability (lead-free)	Dip and look methode Sn95.5Ag3.8Cu0.7: (245 $\pm$ 5) °C, (3 $\pm$ 0.3) s Wetting of soldering area $\geq 90\%$ (based on IEC 60068-2-58)
Resistance to soldering heat	260 °C, 10 s (based on IEC 60068-2-58)
Climatic category	55/125/56 (to IEC 60068-1)
Storage conditions	Mounted: -55 °C ... +125 °C Packaged: -25 °C ... +40 °C, $\leq 75\%$ RH
Weight	Approx. 0.2 g

Characteristics and ordering codes

L_R μH	Tolerance	f_L MHz	I_R A	$I_{sat,typ}$ A	R_{typ} Ω	Ordering code
0.39	$\pm 20\% \triangleq M$	0.1	2.80	3.00	0.016	B82469G1391M000
0.91		0.1	2.00	1.95	0.033	B82469G1911M000
1.5		0.1	1.70	1.55	0.046	B82469G1152M000
2.2		0.1	1.55	1.33	0.065	B82469G1222M000
3.3		0.1	1.30	1.10	0.085	B82469G1332M000
4.7		0.1	1.20	1.00	0.13	B82469G1472M000
6.8		0.1	0.90	0.80	0.17	B82469G1682M000
10		0.1	0.80	0.66	0.27	B82469G1103M000
15		0.1	0.60	0.57	0.37	B82469G1153M000
22		0.1	0.53	0.45	0.53	B82469G1223M000

Preliminary data

**Current derating I_{op}/I_R
versus ambient temperature T_A**
(rated temperature $T_R = 85\text{ °C}$)



Cautions and warnings

- Please note the recommendations in our data book “Chokes and Inductors” (latest edition).
 - 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 any washing varnish agent that is used has an 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 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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