



SMT power inductors

Low profile
Size $2.8 \times 2.6 \times 1.0$ (mm)

Series/Type: **B82467G0**
Date: October 2008

SMT power inductors

B82467G0

Size 2.8 × 2.6 × 1.0 (mm)

Preliminary data

SMD

Rated inductance 0.5 µH to 22 µH

Rated current 0.38 A to 2.25 A



Construction

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

Features

- Low profile
- Temperature range up to 125 °C
- 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 (e.g. mobile phones, MP3 players, etc.)
- EDP (Electronic Data Processing)
- Consumer electronics

Terminals

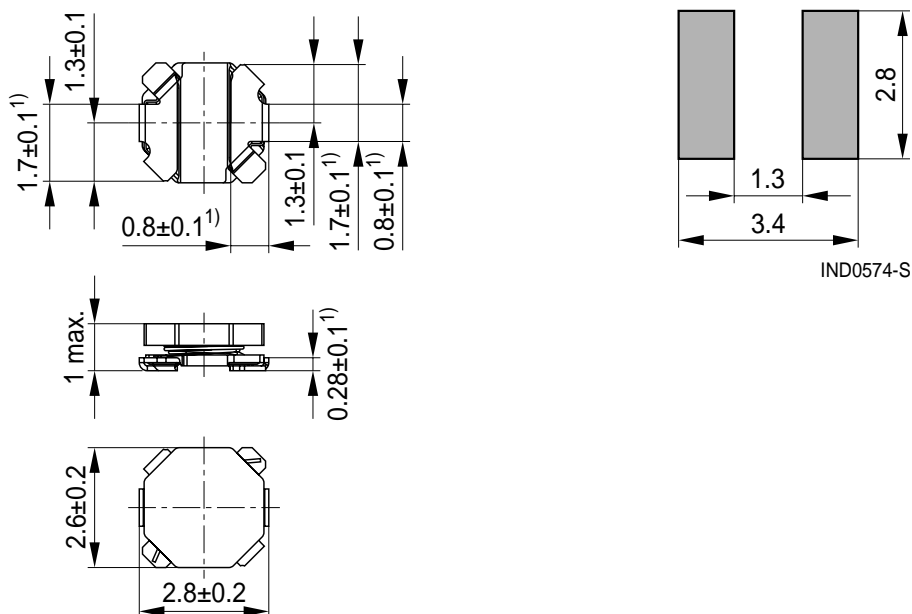
- Base material CuSn6P
- Layer composition Ni, Sn (lead-free)
- Electro-plated

Marking

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

Delivery mode and packing unit

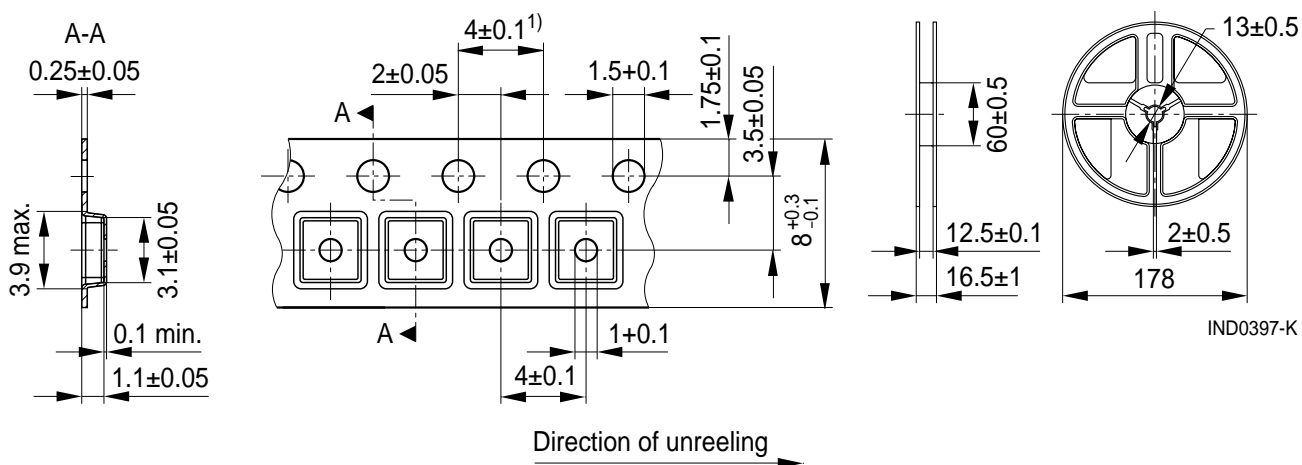
- 8-mm blister tape, wound on 180-mm Ø reel
- Packing unit: 3000 pcs./reel

Dimensional drawing and layout recommendation


1) Soldering area

IND0573-A-E

Dimensions in mm

Taping and packing
Blister tape
Reel


1) Limit tolerance over 10 pitches ±0.2

IND0831-B-E

Dimensions in mm

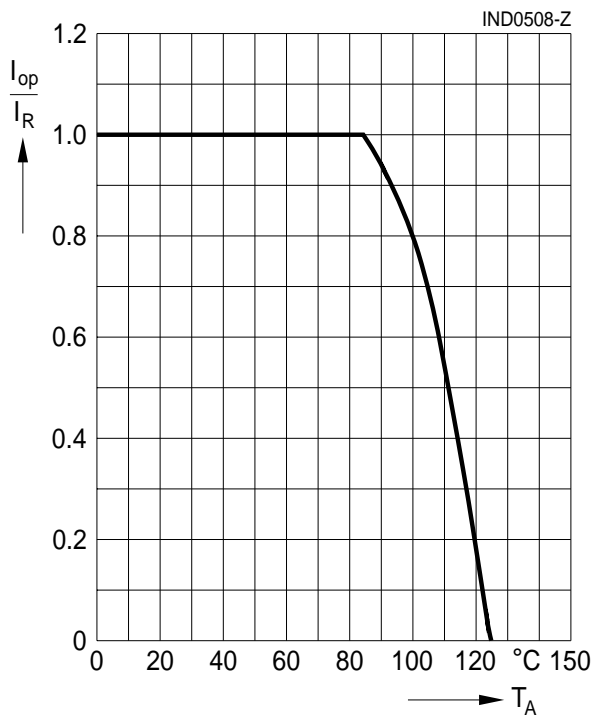
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Technical data and measuring conditions

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, tolerance $\pm 20\%$, typical values
Solderability (lead-free)	Dip and look method 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
0.5	$\pm 20\% \triangleq M$	0.1	2.25	2.00	0.030	B82467G0501M000
1.0		0.1	1.60	1.475	0.050	B82467G0102M000
1.5		0.1	1.25	1.150	0.075	B82467G0152M000
2.2		0.1	1.15	0.950	0.100	B82467G0222M000
3.3		0.1	0.93	0.775	0.165	B82467G0332M000
4.7		0.1	0.80	0.675	0.215	B82467G0472M000
6.8		0.1	0.67	0.580	0.290	B82467G0682M000
10		0.1	0.55	0.480	0.485	B82467G0103M000
15		0.1	0.46	0.370	0.690	B82467G0153M000
22		0.1	0.38	0.320	0.960	B82467G0223M000

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



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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