



SMT power inductors

Low profile
Size $2.0 \times 2.0 \times 1.0$ (mm)

Series/Type: **B82466G0**
Date: March 2008

SMT power inductors

B82466G0

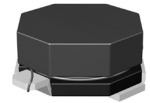
Size 2.0 × 2.0 × 1.0 (mm)

Preliminary data

SMD

Rated inductance 0.56 µH to 22 µH

Rated current 0.25 A to 1.3 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

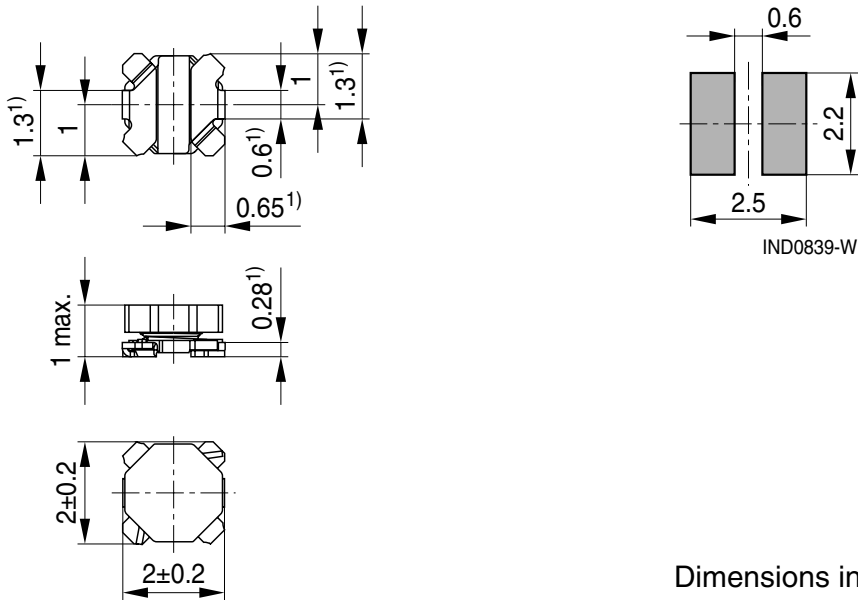
- Base material CuSn6P
- Layer composition Ni, Sn (lead-free)
- Electro-plated

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: 4000 pcs./reel

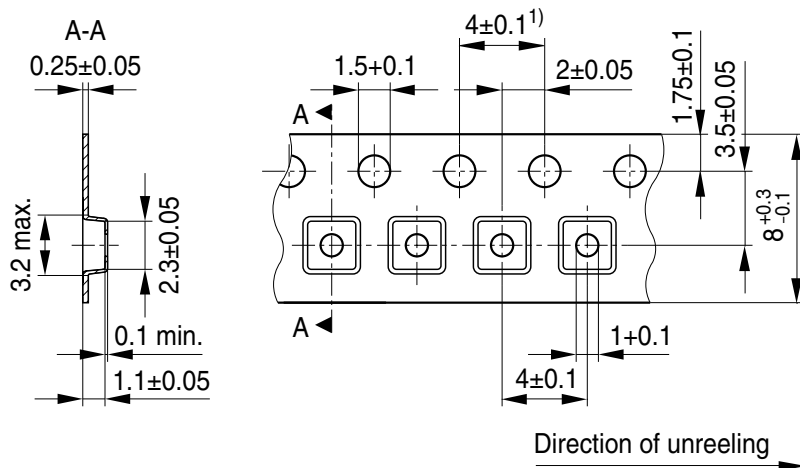
Dimensional drawing and layout recommendation


1) Soldering area

IND0838-R-E

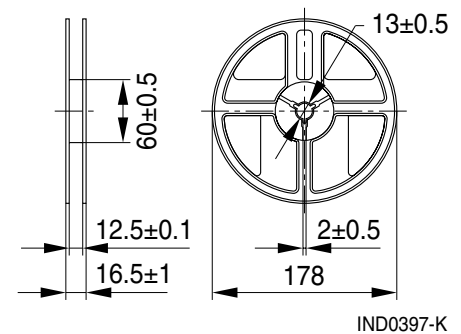
Dimensions in mm

Component tolerances ± 0.2 mm unless otherwise noted.

Taping and packing
Blister tape


1) Limit tolerance over 10 pitches ± 0.2

IND0904-A-E

Reel


IND0397-K

Dimensions in mm

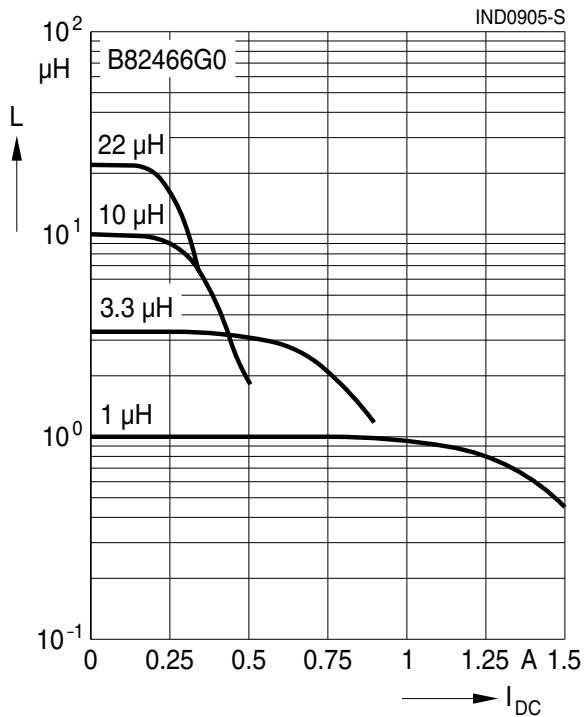
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B82466G0
Size 2.0 × 2.0 × 1.0 (mm)
Preliminary data
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Technical data and measuring conditions

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

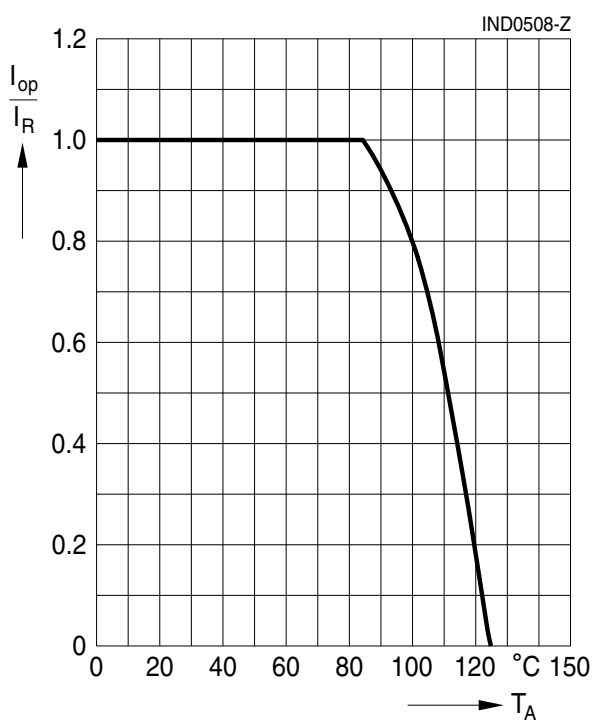
Characteristics and ordering codes

L_R μH	Tolerance	f_L MHz	I_R A	$I_{sat,typ}$ A	R_{typ} Ω	Ordering code
0.56	$\pm 20\% \triangleq M$	0.1	1.30	1.60	0.070	B82466G0561M000
1.0		0.1	1.05	1.20	0.105	B82466G0102M000
1.5		0.1	0.92	1.00	0.145	B82466G0152M000
2.2		0.1	0.77	0.85	0.205	B82466G0222M000
2.7		0.1	0.72	0.76	0.245	B82466G0272M000
3.3		0.1	0.67	0.72	0.265	B82466G0332M000
4.7		0.1	0.60	0.63	0.350	B82466G0472M000
6.8		0.1	0.49	0.51	0.515	B82466G0682M000
10		0.1	0.36	0.40	0.900	B82466G0103M000
15		0.1	0.27	0.32	1.52	B82466G0153M000
22		0.1	0.25	0.26	1.70	B82466G0223M000

Inductance L versus DC load current I_{DC}
 measured with LCR meter Agilent 4275A,
 typical values at 20 °C



Current derating I_{op}/I_R
versus ambient temperature T_A
 (rated temperature $T_R = 85$ °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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