



## **SMT power inductors**

Low profile  
Size 2.0 × 2.0 × 1.0 (mm)

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

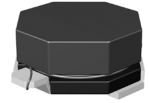
Size 2.0 × 2.0 × 1.0 (mm)

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

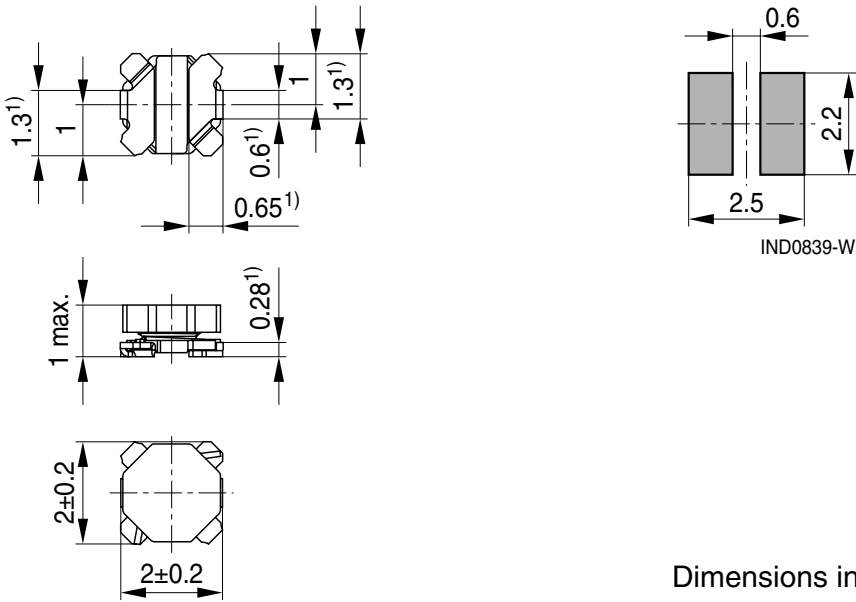
### Marking

- 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



Dimensions in mm

Component tolerances  $\pm 0.2$  mm unless otherwise noted.

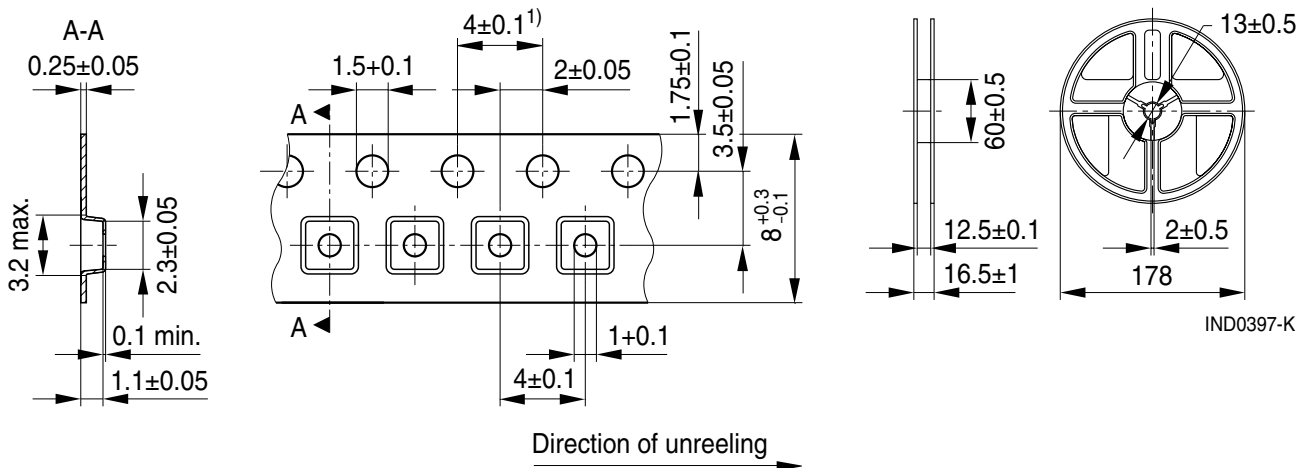
1) Soldering area

IND0838-R-E

Taping and packing

Blister tape

Reel



1) Limit tolerance over 10 pitches  $\pm 0.2$

IND0904-A-E

Dimensions in mm

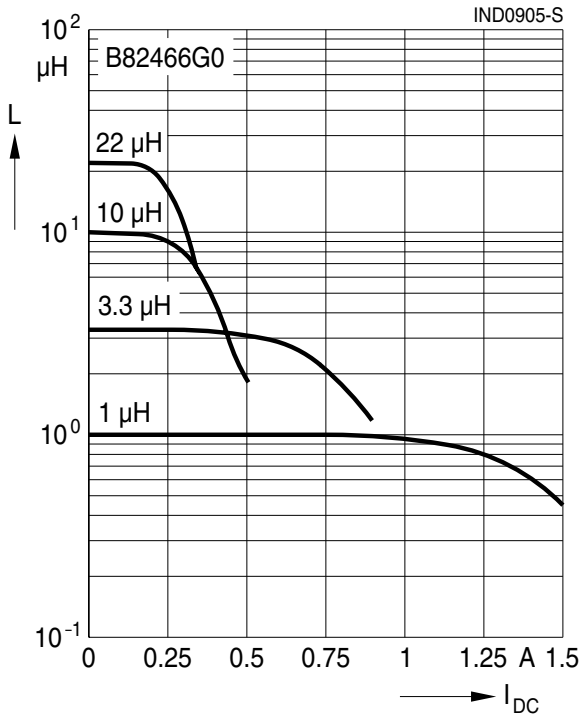
**SMT power inductors**
**B82466G0**
**Size 2.0 × 2.0 × 1.0 (mm)**
**Preliminary data**
**SMD**
**Technical data and measuring conditions**

|                                  |   |
|----------------------------------|---|
| 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 $\leq 40$ 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<br>Wetting of soldering area $\geq 90\%$<br>(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<br>Packaged: -25 °C ... +40 °C, $\leq 75\%$ RH  |
| Weight                           | Approx. 0.2 g   |

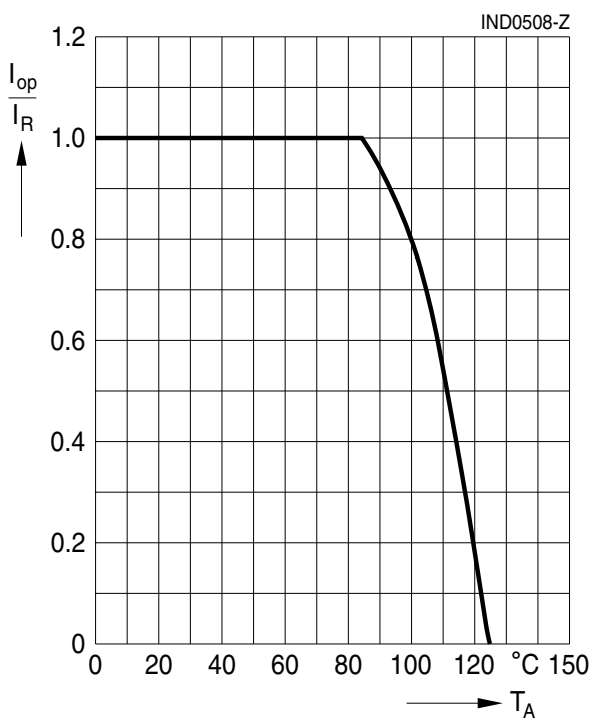
**Characteristics and ordering codes**

| $L_R$<br>$\mu\text{H}$ | Tolerance               | $f_L$<br>MHz | $I_R$<br>A | $I_{sat,typ}$<br>A | $R_{typ}$<br>$\Omega$ | 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  $T_R = 85\text{ °C}$ )



## 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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