SMT–Power–Inductors

Size 10x10x4,8 mm

Datasheet

Ordering code:	**B82464Z4XXXM000**
Date:	2007–06–11
Version:	01

Rated inductance 0,82 µH .. 1000 µH

Construction

- Ferrite core
- Magnetically shielded
- Winding: enamel copper wire
- Winding soldered to terminals

Features

- Wide temperature range
- Very high rated current
- Low DC resistance
- Suitable for leadfree reflow soldering

Applications

- Filtering of supply voltages
- Coupling, decoupling
- DC/DC converters
- Telecom, EDP, consumer electronics

Terminals

- Leadfree tinned

Marking

Marking on component:
Manufacturer
L value (in µH) and tolerance (coded)
date of manufacture (coded)

Minimum marking on reel:
Manufacturer, part number, ordering code,
L value and tolerance
quantity, date of packing

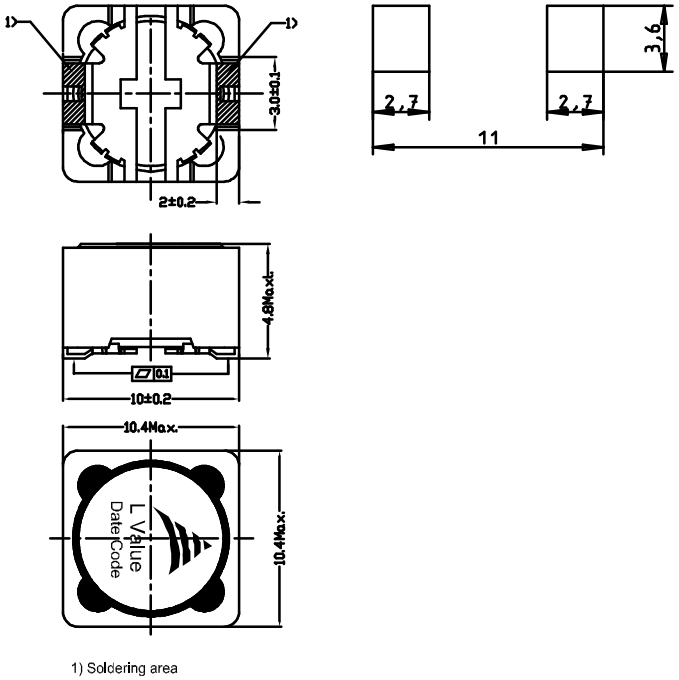
Delivery mode

Blister tape 16mm, reel packing ϕ 330mm
packaging quantity 750 pcs per reel

General technical data

Rated inductance L_R	Measured with HP 4294A, measuring voltage 100 mV
Rated current I_R	Maximum permissible DC with temperature increase of ≤ 40 K at ambient temperature of 85 °C
Saturation current	Maximum permissible DC with inductance decrease $\Delta L/L_0 \approx 10\%$
Self–resonance frequency f_{res}	Typical self–resonance frequency measured with network analyzer HP 8753
Climatic category	In accordance with IEC 60068–1 55/125/56 (–55 °C/ +125 °C/ 56 days damp heat test)
Solderability	5s, 235°C, wetting > 90%
Reflow conditions	260°C, 10s
DC resistance R_{max}	Measured at 20 °C ambient temperature
Weight	Approx. 2g

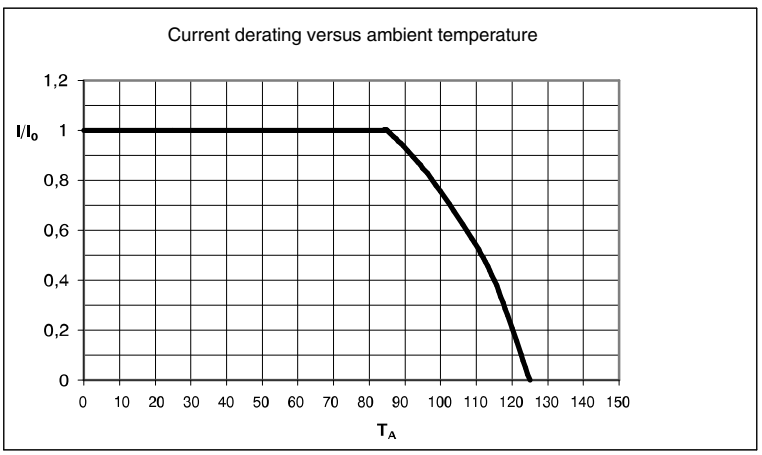
Dimensional drawing and layout recommendation



1) Soldering area

Characteristics and ordering codes

L_R µH	f_L MHz	Tolerance	I_{sat} A	I_R A	R_{max} Ω	Ordering code
0,82	0,1	20 %	10,3	7,60	0,007	B82464Z4821M000
1,0	0,1	20 %	10	7,50	0,007	B82464Z4102M000
1,5	0,1	20 %	8,50	7,00	0,009	B82464Z4152M000
2,2	0,1	20 %	7,00	6,50	0,010	B82464Z4222M000
3,3	0,1	20 %	5,90	5,50	0,012	B82464Z4332M000
4,7	0,1	20 %	5,20	4,90	0,015	B82464Z4472M000
6,8	0,1	20 %	4,30	4,30	0,020	B82464Z4682M000
10	0,1	20 %	3,50	3,40	0,030	B82464Z4103M000
15	0,1	20 %	2,95	2,75	0,040	B82464Z4153M000
22	0,1	20 %	2,50	2,25	0,052	B82464Z4223M000
33	0,1	20 %	2,00	1,85	0,075	B82464Z4333M000
47	0,1	20 %	1,70	1,55	0,095	B82464Z4473M000
68	0,1	20 %	1,35	1,30	0,13	B82464Z4683M000
100	0,1	20 %	1,10	1,05	0,22	B82464Z4104M000
150	0,1	20 %	0,90	0,85	0,32	B82464Z4154M000
220	0,1	20 %	0,75	0,70	0,44	B82464Z4224M000
330	0,1	20 %	0,61	0,59	0,65	B82464Z4334M000
470	0,1	20 %	0,52	0,50	0,93	B82464Z4474M000
680	0,1	20 %	0,43	0,42	1,30	B82464Z4684M000
1000	0,1	20%	0,35	0,34	2,20	B82464Z4105M000



Caution and warnings

- Please note the advices in our data book “Chokes and Inductors” (latest edition); attention should be paid to the chapter “General safety notes”.
  - Particular attention should be paid to the derating curves given there.
  - The soldering conditions given there 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, it is necessary to check whether any washing 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 agent residues to have a negative effect in the long–term on wire insulation.
- The following points must be observed if the components are pottet:
  - Many potting materials shrink as they harden. They therefore exert a pressure on the 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.
  - 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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