SMD

Size 1210 (EIA) or 3225 (IEC)
Rated inductance 1 to 680 µH
Rated current 61 to 1150 mA

Construction

- Ferrite drum core
- Laser–welded winding
- Flame–retardant encapsulation

Features

- Very high current handling capability
- Suitable for reflow soldering acc. JEDEC J–STD 020C
- lead–free, RoHS–compatible
- qualified acc. AEC–Q200

Applications

- Filtering of supply voltages, coupling, decoupling
- DC/DC converters / switch mode power supplies
- Automotive electronics
- Telecommunications

Terminals

- Electro–plated
- Base material CuSn6
- 0,4µm Cu; 1–2µm Ag; 5–7µm Sn (lead-free)

Marking

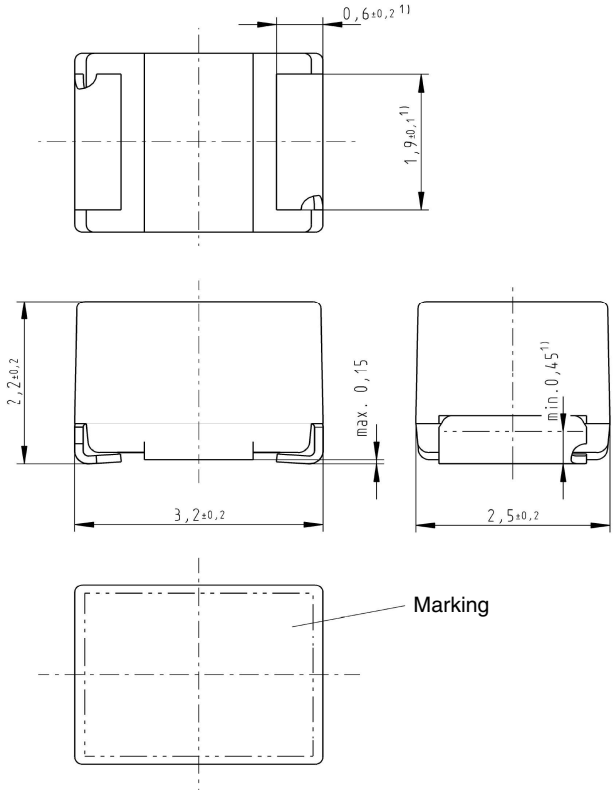
Marking on component:
L value (in µH) and tolerance of L value (coded)
Date of manufacture (coded)

Delivery mode

8mm blister tape, reel packing 180mm Ø reel (2000 pcs) or 330mm Ø reel (7500 pcs)
Taping in accordance to IEC 60286–3. For details on taping and packing refer to data book “Chokes and Inductors” and to Epcos Homepage.

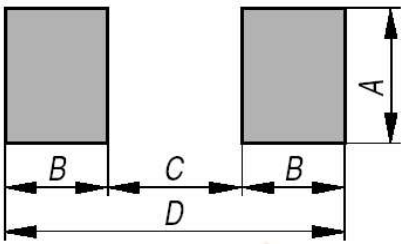
SMD

Dimensional drawing



1) Soldering area, tinned

Layout recommendation



Dimensions (mm)	A	B	C	D
Reflow soldering	2,70	1,15	1,80	4,40

Technical data and measuring conditions

Electrical specifications at T_A = 20°C

Rated inductance L_R	Measured with impedance analyzer HP 4294A at frequency f_L
Q factor Q_{min}	Measured with impedance analyzer HP 4294A at frequency f_Q
Rated current I_R	Maximum permissible DC with inductance decrease $\Delta L/L_0 \leq 10\%$ and temperature increase of $\leq 45K$ at rated temperature of 105°C
Self–resonance frequency $f_{res,min}$	Measured with network analyzer HP 8753
DC resistance R_{max}	measuring current < I_R
Climatic category	55/150/56 to IEC 60068–1
Solderability	lead-free to IEC 60068–2–58 and Jedec J–STD 002B / JESD22–B102D
Resistance to soldering heat	to IEC 60068–2–20 and MIL–STD–202, method 210
Permissible PCB bending	2mm (100mm long standard PCB)
Weight	Approx. 50mg

SMD

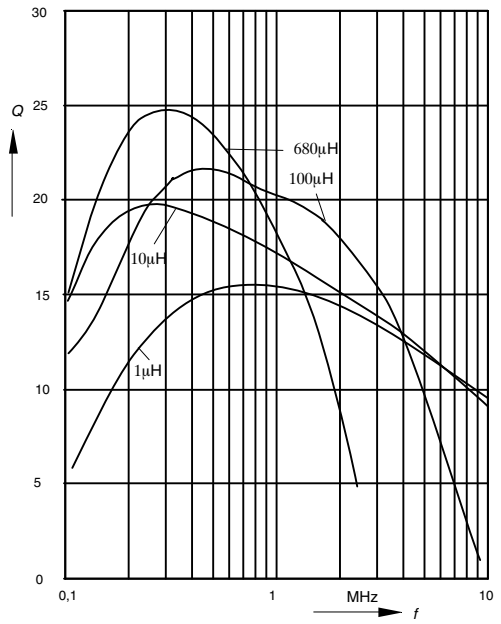
Characteristics and ordering codes

L_R µH	Tolerance [1]	Q_{min}	$f_L;f_Q$ MHz	I_R mA	R_{max} Ω	$f_{res,min}$ MHz	Ordering code [2] (⌀ 180–mm reel)
Core material: ferrite							
1,0	±10% ≙ K	8	7,96	1150	0,10	150	B82422H1102K000
1,5		8	7,96	900	0,14	110	B82422H1152K000
2,2		8	7,96	800	0,16	90	B82422H1222K000
3,3	±5% ≙ J ±10% ≙ K	8	7,96	770	0,18	70	B82422H1332+000
4,7		8	7,96	700	0,25	46	B82422H1472+000
6,8		8	7,96	570	0,35	35	B82422H1682+000
10		12	2,52	500	0,46	30	B82422H1103+000
15		12	2,52	390	0,72	26	B82422H1153+000
22		12	2,52	330	1,00	21	B82422H1223+000
33		15	2,52	280	1,40	15	B82422H1333+000
47		15	2,52	230	2,10	12	B82422H1473+000
68		15	2,52	180	3,40	10	B82422H1683+000
100		20	0,796	150	4,80	8,0	B82422H1104+000
150		20	0,796	120	7,50	6,0	B82422H1154+000
220		20	0,796	100	10,90	5,5	B82422H1224+000
330		20	0,796	90	13,00	4,5	B82422H1334+000
470		20	0,796	76	20,00	3,5	B82422H1474+000
680		20	0,796	61	31,00	3,0	B82422H1684+000

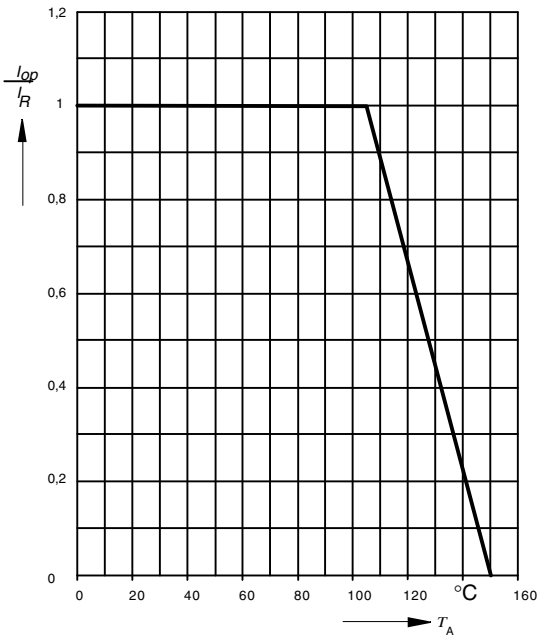
1) Closer tolerances and special versions upon request.
2) Replace the + by the code letter for the required inductance tolerance.

SMD

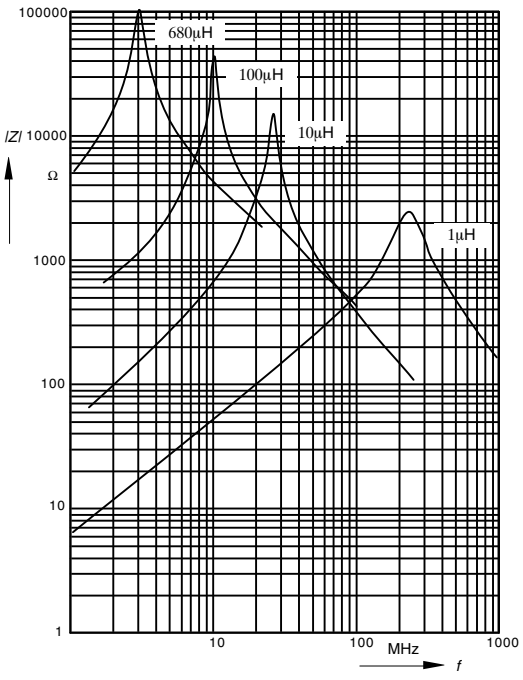
Q factor versus frequency *f*
measured with Agilent 4294A



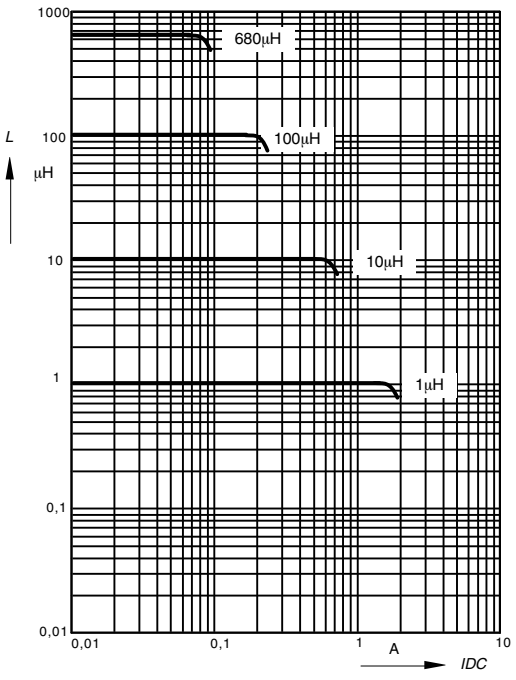
Current derating I_{op}/I_R
versus ambient temperature T_A



Impedance |Z| versus frequency f
measured with Agilent 4294A



inductance L versus dc load current I_{DC}
measured with LCR meter Agilent 4284A



Important notes

The following applies to all products named in this publication:

1. Some parts of this publication contain **statements about the suitability of our products for certain areas of application**. These statements are based on our knowledge of typical requirements that are often placed on our products in the areas of application concerned. We nevertheless expressly point out **that such statements cannot be regarded as binding statements about the suitability of our products for a particular customer application.** As a rule, EPCOS is either unfamiliar with individual customer applications or less familiar with them than the customers themselves. For these reasons, it is always ultimately incumbent on the customer to check and decide whether an EPCOS product with the properties described in the product specification is suitable for use in a particular customer application.
2. We also point out that **in individual cases, a malfunction of passive electronic components or failure before the end of their usual service life cannot be completely ruled out in the current state of the art, even if they are operated as specified.** In customer applications requiring a very high level of operational safety and especially in customer applications in which the malfunction or failure of a passive electronic component could endanger human life or health (e.g. in accident prevention or life-saving systems), it must therefore be ensured by means of suitable design of the customer application or other action taken by the customer (e.g. installation of protective circuitry or redundancy) that no injury or damage is sustained by third parties in the event of malfunction or failure of a passive electronic component.
3. **The warnings, cautions and product-specific notes must be observed.**
4. In order to satisfy certain technical requirements, **some of the products described in this publication may contain substances subject to restrictions in certain jurisdictions (e.g. because they are classed as "hazardous")**. Useful information on this will be found in our Material Data Sheets on the Internet (www.epcos.com/material). Should you have any more detailed questions, please contact our sales offices.
5. We constantly strive to improve our products. Consequently, **the products described in this publication may change from time to time**. The same is true of the corresponding product specifications. Please check therefore to what extent product descriptions and specifications contained in this publication are still applicable before or when you place an order.

   We also **reserve the right to discontinue production and delivery of products**. Consequently, we cannot guarantee that all products named in this publication will always be available.
6. Unless otherwise agreed in individual contracts, **all orders are subject to the current version of the "General Terms of Delivery for Products and Services in the Electrical Industry" published by the German Electrical and Electronics Industry Association (ZVEI)**.
7. The trade names EPCOS, EPCOS-JONES, Baoke, CeraDiode, CSSP, MLSC, PhaseCap, PhaseMod, SIFERRIT, SIFI, SIKOREL, SilverCap, SIMID, SIOV, SIP5D, SIP5K, UltraCap, WindCap are **trademarks registered or pending** in Europe and in other countries. Further information will be found on the Internet at www.epcos.com/trademarks.