

**SMD**

**Size 1210 (EIA) or 3225 (IEC)**  
**Rated inductance 1 to 680  $\mu$ H**  
**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
- 0,4 $\mu$ m Cu; 1-2 $\mu$ m Ag; 5-7 $\mu$ m Sn (lead-free)

### Marking

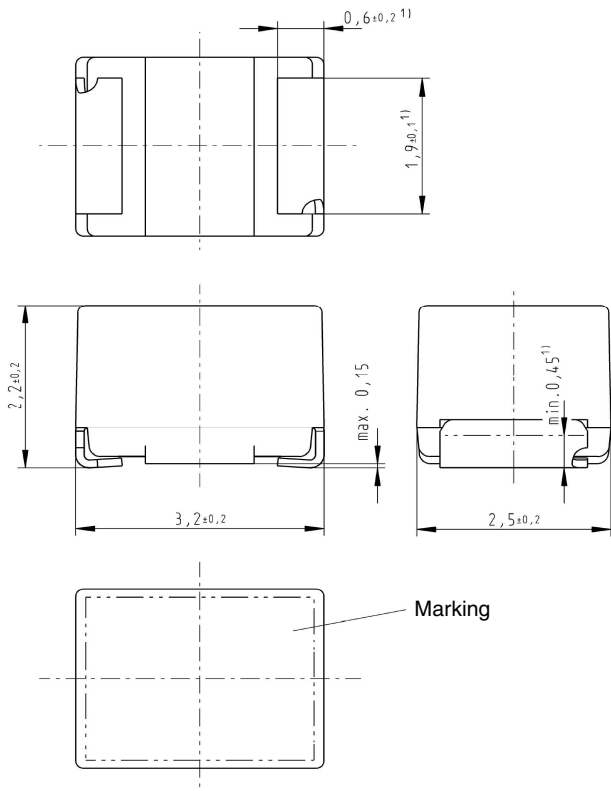
Marking on component:  
L value (in  $\mu$ H) and tolerance of L value (coded)  
Date of manufacture (coded)

### Delivery mode

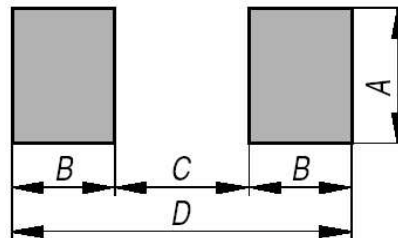
8mm blister tape, reel packing 180mm  $\varnothing$  reel (2000 pcs) or 330mm  $\varnothing$  reel (7500 pcs)  
Taping in accordance to IEC 60286-3. For details on taping and packing refer to data book "Chokes and Inductors" and to Epcos Homepage.



**Dimensional drawing**



**Layout recommendation**



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

1) Soldering area, tinned

**Technical data and measuring conditions**

Electrical specifications at  $T_A = 20^\circ\text{C}$

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 $\leq 45\text{K}$ at rated temperature of $105^\circ\text{C}$
Self-resonance frequency $f_{\text{res},\min}$	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


**Characteristics and ordering codes**

$L_R$	Tolerance <sup>1)</sup>	$Q_{min}$	$f_L; f_Q$	$I_R$	$R_{max}$	$f_{res,min}$	Ordering code <sup>2)</sup> ( $\varnothing$ 180-mm reel)
$\mu H$			MHz	mA	$\Omega$	MHz	

Core material: ferrite

1,0	$\pm 10\%$ $\triangle K$	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	$\pm 5\%$ $\triangle J$ $\pm 10\%$ $\triangle K$	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	

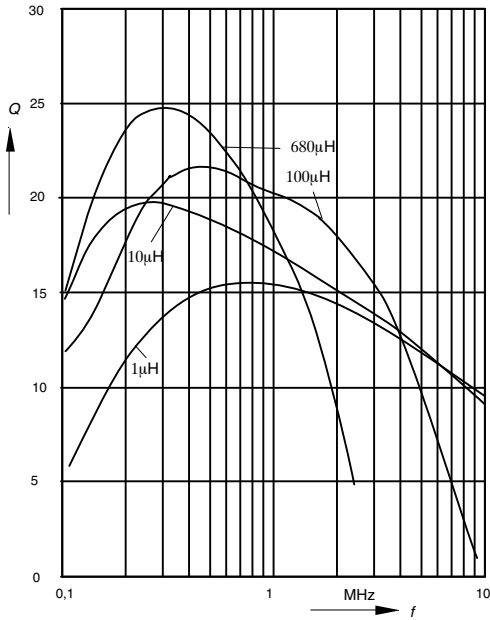
1) Closer tolerances and special versions upon request.

2) Replace the + by the code letter for the required inductance tolerance.

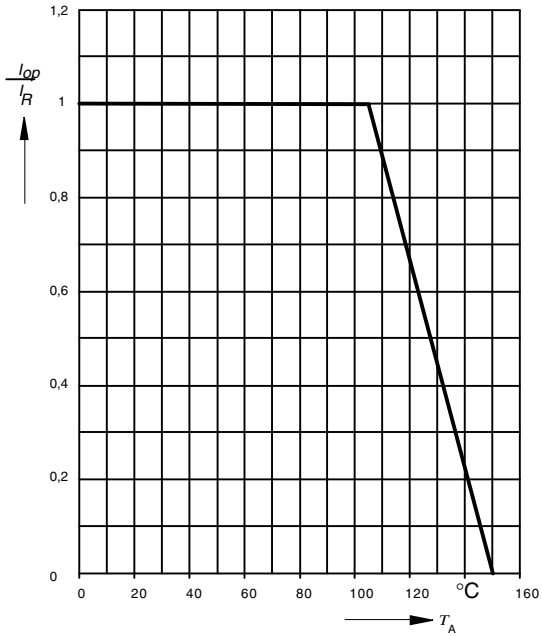
**SIMID 1210-H**



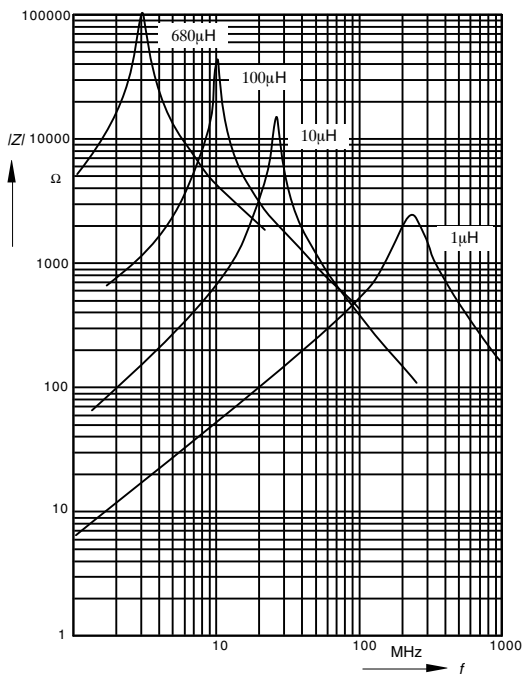
Q factor versus frequency  $f$   
measured with Agilent 4294A



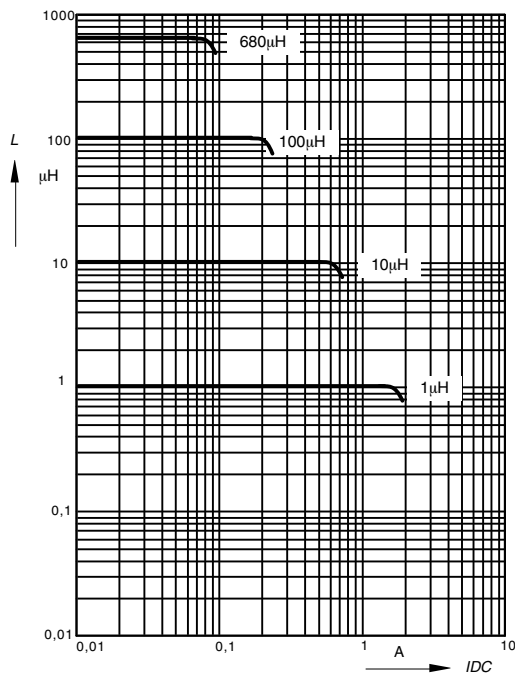
Current derating  $I_{op}/I_R$   
versus ambient temperature  $T_A$



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



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



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