



SMT Inductors

SIMID 1812-T
B82432-T

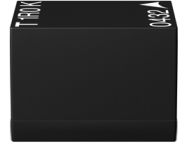
Data Sheet



<http://www.epcos.com>



Size 1812 (EIA) or 4532 (IEC)
Rated inductance 1,0 to 1000 μ H
Rated current 70 to 1300 mA



Construction

- Upright ferrite drum core
- Laser-welded winding
- Flame-retardant encapsulation

Features

- High current handling capability
- Suitable for reflow (IR and vapor phase) and wave soldering
- Same measuring frequency for L and Q

Applications

- Filtering of supply voltages, coupling, decoupling
- DC/DC converters
- Automotive electronics (e.g. single-wire CAN)
- Telecommunications

Terminals

- Lead-free tinned
- Finish: 0,4 μ m Cu, 1–2 μ m Ag, 5–7 μ m Sn
- Base material CuSn6
- No leaching during wave soldering

Marking

Marking on component:

Manufacturer and letter »T«,
 L value (in μ H) and tolerance of L value (coded),
date of manufacture (coded)

Minimum data on reel:

Manufacturer, part number, ordering code,
 L value and tolerance of L value,
quantity, date of packing

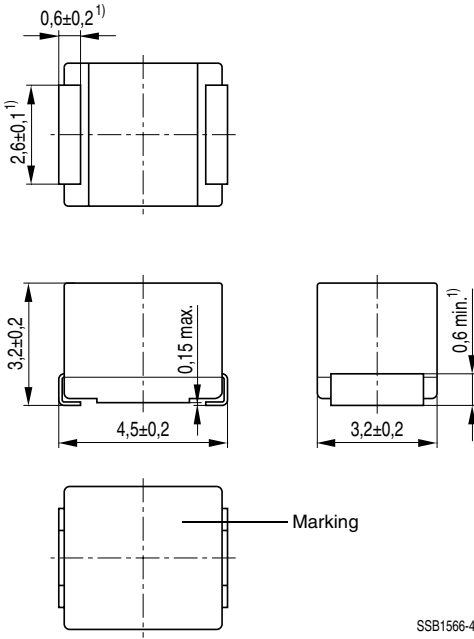
Delivery mode

12-mm blister tape, wound on 330-mm \varnothing reel
For details on taping, packing and packing units
see data book "Chokes and Inductors", page 153.


General technical data

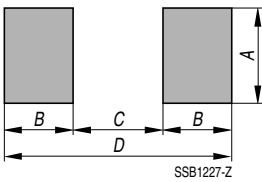
Rated inductance L_R	Measured with impedance analyzer HP 4294A at frequency f_L
Q factor Q_{\min}	Measured with impedance analyzer HP 4294A at frequency f_Q
Rated current I_R	Maximum permissible dc with inductance decrease $\Delta L/L_0 \leq 10\%$ and temperature increase of $\leq 40\text{ K}$ at rated temperature of 85°C
Self-resonance frequency $f_{\text{res, min}}$	Measured with network analyzer HP 8753
DC resistance R_{\max}	Measured at 20°C ambient temperature, measuring current $< I_R$
Climatic category	In accordance with IEC 60068-1 55/125/56 ($-55^\circ\text{C}/+125^\circ\text{C}/56$ days damp heat test)
Solderability	In accordance with IEC 60062-2-58 (215 ± 3) $^\circ\text{C}$, ($3 \pm 0,3$) s Wetting of soldering area: $\geq 90\%$
Resistance to soldering heat	In accordance with IEC 60068-2-20 260°C , 10 s $\Delta L/L \leq \pm 3\%$
Permissible PCB bending	2 mm (100 mm long standard PCB)
Weight	Approx. 130 mg

Dimensional drawing



SSB1566-4

Layout recommendation



Dimensions (mm)	A	B	C	D
Wave soldering	3,1	1,7	3,2	6,6
Reflow soldering	3,6	1,3	3,2	5,8

1) Soldering area, tinned


Characteristics and ordering codes

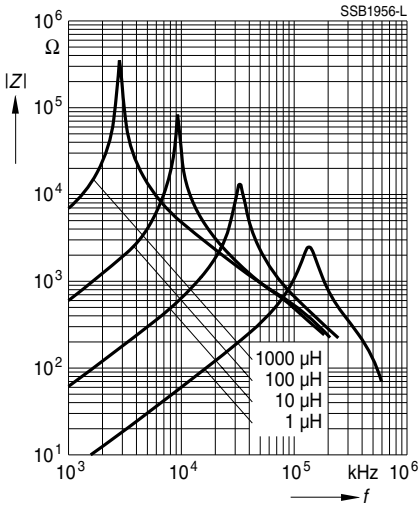
L_R μH	Tolerance	Q_{\min}	$f_L; f_Q$ MHz	I_R mA	R_{\max} Ω	$f_{\text{res, min}}$ MHz	Ordering code
1,0	$\pm 10\%$ $\triangleq K$	10	7,96	1300	0,08	110	B82432-T1102-K
1,2		10	7,96	1200	0,10	100	B82432-T1122-K
1,5		10	7,96	1150	0,11	80	B82432-T1152-K
1,8		10	7,96	1050	0,13	70	B82432-T1182-K
2,2		10	7,96	1000	0,15	60	B82432-T1222-K
2,7		10	7,96	950	0,17	55	B82432-T1272-K
3,3		10	7,96	900	0,19	50	B82432-T1332-K
3,9		10	7,96	850	0,20	45	B82432-T1392-K
4,7		10	7,96	800	0,22	40	B82432-T1472-K
5,6		10	7,96	750	0,26	38	B82432-T1562-K
6,8		10	7,96	700	0,30	36	B82432-T1682-K
8,2		10	7,96	670	0,33	30	B82432-T1822-K
10		10	2,52	650	0,35	25	B82432-T1103-K
12		10	2,52	630	0,45	23	B82432-T1123-K
15		10	2,52	600	0,50	20	B82432-T1153-K
18		10	2,52	550	0,60	18	B82432-T1183-K
22	10	2,52	450	0,70	15	B82432-T1223-K	
27	10	2,52	430	1,00	14	B82432-T1273-K	
33	10	2,52	400	1,20	13	B82432-T1333-K	
39	10	2,52	380	1,30	12	B82432-T1393-K	
47	10	2,52	350	1,35	11	B82432-T1473-K	
56	10	2,52	300	2,00	10	B82432-T1563-K	
68	10	2,52	250	2,50	8,0	B82432-T1683-K	
82	10	2,52	220	3,00	7,0	B82432-T1823-K	
100	20	0,796	200	3,50	6,5	B82432-T1104-K	
120	20	0,796	180	4,50	6,3	B82432-T1124-K	
150	20	0,796	160	6,00	6,1	B82432-T1154-K	


Characteristics and ordering codes (cont'd)

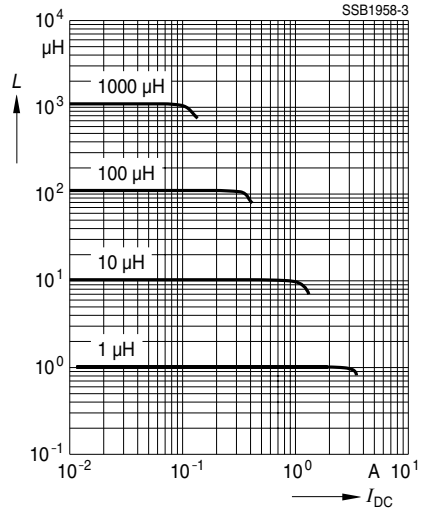
L_R μH	Tolerance	Q_{\min}	$f_L; f_Q$ MHz	I_R mA	R_{\max} Ω	$f_{\text{res, min}}$ MHz	Ordering code
180	$\pm 10\%$ $\triangleq K$	20	0,796	140	7,00	5,5	B82432-T1184-K
220		20	0,796	130	7,50	4,5	B82432-T1224-K
270		20	0,796	120	10,5	4,3	B82432-T1274-K
330		20	0,796	120	11,0	4,1	B82432-T1334-K
390		20	0,796	110	13,0	3,9	B82432-T1394-K
470		20	0,796	100	15,0	3,5	B82432-T1474-K
560		20	0,796	90	20,0	3,0	B82432-T1564-K
680		20	0,796	80	23,0	2,6	B82432-T1684-K
820		20	0,796	80	27,0	2,4	B82432-T1824-K
1000		20	0,252	70	30,0	2,3	B82432-T1105-K



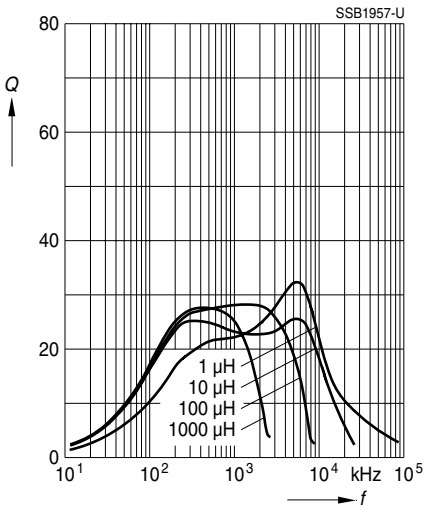
Impedance $|Z|$
versus frequency f
measured with impedance analyzer
HP 4291A; test fixture 16193A



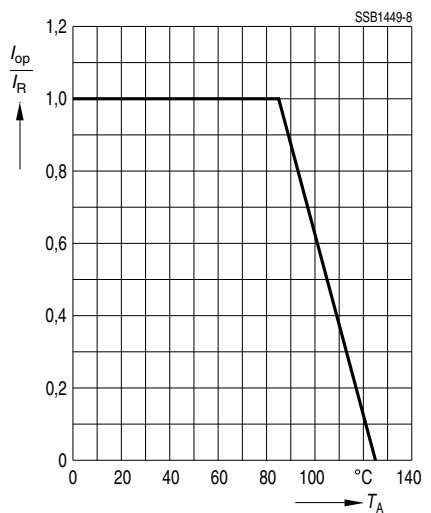
Inductance L
versus dc load current I_{DC}
measured with LCR meter
HP 4275A



Q factor versus frequency f
measured with impedance analyzer
HP 4294A; test fixture 16193A



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



Published by EPCOS AG

Marketing Communications, P.O. Box 80 17 09, 81617 Munich, GERMANY

© EPCOS AG 2001. All Rights Reserved. Reproduction, publication and dissemination of this brochure and the information contained therein without EPCOS' prior express consent is prohibited.

The information contained in this brochure describes the type of component and shall not be considered as guaranteed characteristics. Purchase orders are subject to the General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry recommended by the ZVEI (German Electrical and Electronic Manufacturers' Association), unless otherwise agreed.

This brochure replaces the previous edition.

For questions on technology, prices and delivery please contact the Sales Offices of EPCOS AG or the international Representatives.

Due to technical requirements components may contain dangerous substances. For information on the type in question please also contact one of our Sales Offices.