EPCOS

SMT Inductors

SIMID 1812-T
B82432-T

SMD

Size 1812 (EIA) or 4532 (IEC)
Rated inductance 1,0 to 1000 µH
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 µm Cu, 1–2 µm Ag, 5–7 µm Sn
- Base material CuSn6
- No leaching during wave soldering

Marking

Marking on component:
Manufacturer and letter »T«,
L value (in µH) 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

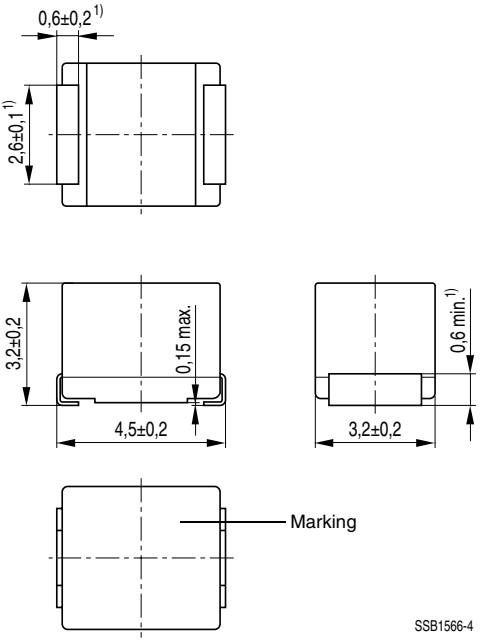
12-mm blister tape, wound on 330-mm ∅ reel
For details on taping, packing and packing units
see data book "Chokes and Inductors", page 153.

General technical data

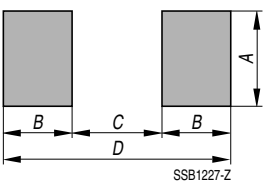
Rated inductance L_R	Measured with impedance analyzer HP 4294A at frequency f_L
Q factor Q_{min}	Measured with impedance analyzer HP 4294A at frequency f_Q
Rated current I_R	Maximum permissible dc with inductance decrease $\Delta L/L_0 \leq 10$ % and temperature increase of ≤ 40 K at rated temperature of 85 °C
Self-resonance frequency $f_{res, min}$	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 °C/+ 125 °C/56 days damp heat test)
Solderability	In accordance with IEC 60062-2-58 (215 ± 3) °C, (3 ± 0,3) s Wetting of soldering area: ≥ 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

SMD

Dimensional drawing



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

SMD

Characteristics and ordering codes

L_R µH	Tolerance	Q_{min}	f_L;f_Q MHz	I_R mA	R_{max} Ω	$f_{res,\ min}$ MHz	Ordering code
1,0	± 10 % ≙ 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

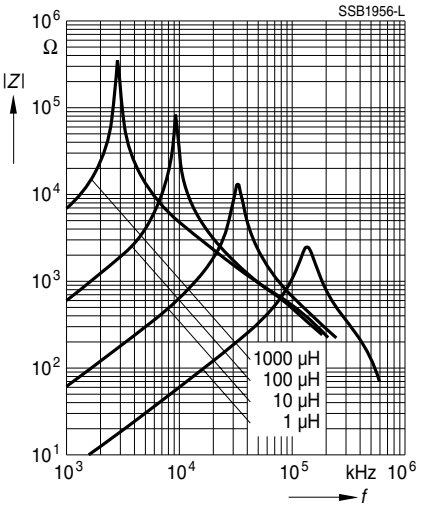
SMD

Characteristics and ordering codes (cont'd)

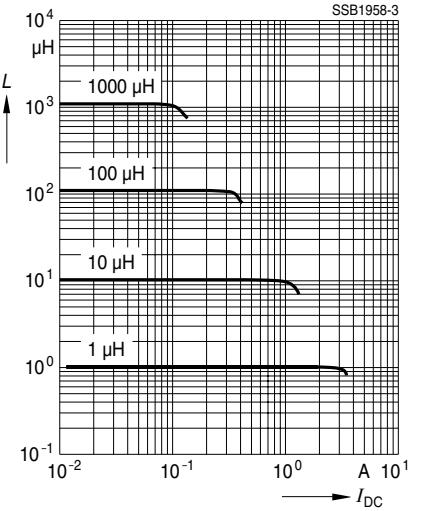
L_R µH	Tolerance	Q_{min}	f_L;f_Q MHz	I_R mA	R_{max} Ω	$f_{res, min}$ MHz	Ordering code
180	± 10 % ≙ K	20	0,796	140	7,00	5,5	B82432-T1184-K
220		20	0,796	130	7,50	4,5	B82432-T1224-K
270		20	0,796	120	10,5	4,3	B82432-T1274-K
330		20	0,796	120	11,0	4,1	B82432-T1334-K
390		20	0,796	110	13,0	3,9	B82432-T1394-K
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

SMD

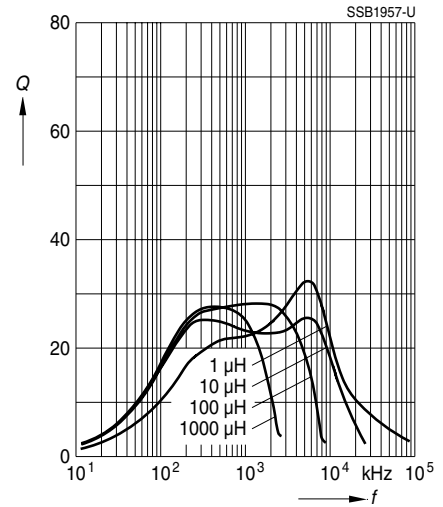
Impedance $|Z|$
versus frequency f
measured with impedance analyzer
HP 4291A; test fixture 16193A



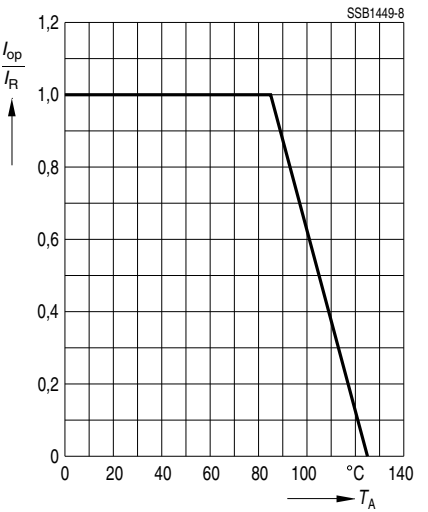
Inductance L
versus dc load current I_{DC}
measured with LCR meter
HP 4275A



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

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.