



SMT Inductors, SIMID Series

B82432-A

SIMID 1812-A

SMD

**Size 1812 (EIA) or 4532 (IEC)**  
**Rated inductance 1,0 to 1000  $\mu$ H**  
**Rated current 55 to 600 mA**



### Construction

- Ferrite core
- US-welded winding
- Flame-retardant encapsulation

### Features

- High  $Q$  factor
- High resonance frequency
- Suitable for reflow (IR and vapor phase) and wave soldering

### Applications

- Filtering of supply voltages, coupling, decoupling
- Antenna systems
- Automotive electronics
- Telecommunications

### Terminals

- Silver-plated
- 1–2  $\mu$ m Cu, 4–6  $\mu$ m Ag
- Base material CuSn6
- Suitable for soldering and conductive adhesion
- No leaching during wave soldering

### Marking

Marking on component:

Manufacturer and series mark »–«

$L$  value (in nH) 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 page 153](#)



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B82432-A

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**General technical data**

Rated inductance $L_R$	Measured with impedance analyzer HP 4194A at frequency $f_L$
Q factor $Q_{\min}$	Measured with impedance analyzer HP 4194A at frequency $f_Q$
Rated current $I_R$	Maximum permissible dc with inductance decrease $\Delta L/L_0 \leq 10\%$ and temperature increase of $\leq 30\text{ K}$ at rated temperature of $85^\circ\text{C}$
Self-resonance frequency $f_{\text{res, min}}$	Measured with network analyzer HP 8753
DC resistance $R_{\text{max}}$	Measured at $20^\circ\text{C}$ 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 ( $215 \pm 3$ ) $^\circ\text{C}$ , ( $3 \pm 0,3$ ) s Wetting of soldering area: $\geq 95\%$
Resistance to soldering heat	In accordance with IEC 60068-2-20 $260^\circ\text{C}$ , 10 s $\Delta L/L \leq \pm 3\%$
Permissible PCB bending	2 mm (100 mm long standard PCB)
Weight	Approx. 130 mg



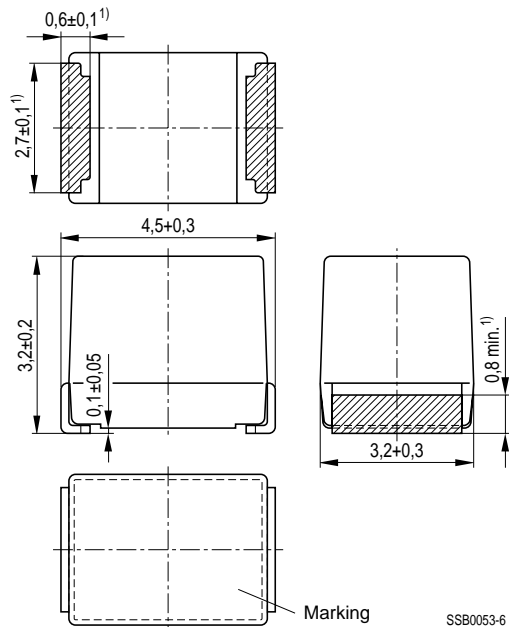
SMT Inductors, SIMID Series

B82432-A

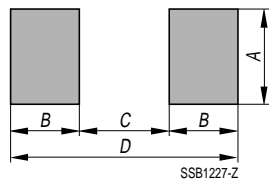
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**Dimensional drawing**



**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, silver-plated



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B82432-A

SIMID 1812-A



## Characteristics and ordering codes

$L_R$ $\mu\text{H}$	Tolerance <sup>1)</sup> $\triangleq K$	$f_L$ MHz	$Q_{\min}$	$f_Q$ MHz	$I_R$ mA	$R_{\max}$ $\Omega$	$f_{\text{res, min}}$ MHz	Ordering code
1,0	$\pm 10\%$ $\triangleq K$	1	25	7,96	600	0,28	260	B82432-A1102-K
1,2		1	25	7,96	560	0,32	250	B82432-A1122-K
1,5		1	25	7,96	535	0,35	230	B82432-A1152-K
1,8		1	25	7,96	490	0,41	210	B82432-A1182-K
2,2		1	30	7,96	480	0,43	190	B82432-A1222-K
2,7		1	30	7,96	450	0,49	170	B82432-A1272-K
3,3		1	30	7,96	425	0,55	155	B82432-A1332-K
3,9		1	30	7,96	410	0,59	145	B82432-A1392-K
4,7		1	30	7,96	390	0,65	110	B82432-A1472-K
5,6		1	30	7,96	375	0,71	100	B82432-A1562-K
6,8		1	30	7,96	360	0,78	75	B82432-A1682-K
8,2		1	30	7,96	330	0,92	23	B82432-A1822-K
10		1	45	2,52	320	0,98	22	B82432-A1103-K
12		0,1	45	2,52	300	1,10	19	B82432-A1123-K
15		0,1	45	2,52	280	1,25	17	B82432-A1153-K
18		0,1	45	2,52	270	1,35	15	B82432-A1183-K
22	0,1	45	2,52	260	1,45	13	B82432-A1223-K	
27	0,1	45	2,52	245	1,65	12	B82432-A1273-K	

1) Closer tolerances and special versions upon request.



SMT Inductors, SIMID Series

B82432-A

SIMID 1812-A



## Characteristics and ordering codes (continued)

$L_R$ $\mu\text{H}$	Tolerance <sup>1)</sup>	$f_L$ MHz	$Q_{\min}$	$f_Q$ MHz	$I_R$ mA	$R_{\max}$ $\Omega$	$f_{\text{res, min}}$ MHz	Ordering code <sup>2)</sup>
33	$\pm 5\%$	0,1	45	2,52	230	1,85	10,5	B82432-A1333-+
39	$\triangle J$	0,1	45	2,52	220	2,05	10,0	B82432-A1393-+
47	$\pm 10\%$	0,1	40	2,52	210	2,3	9,5	B82432-A1473-+
56	$\triangle K$	0,1	40	2,52	200	2,5	9,0	B82432-A1563-+
68		0,1	40	2,52	190	2,8	8,0	B82432-A1683-+
82		0,1	35	2,52	175	3,2	7,0	B82432-A1823-+
100		0,1	40	2,52	145	4,7	6,5	B82432-A1104-+
120		0,1	35	0,796	140	5,2	6,0	B82432-A1124-+
150		0,1	35	0,796	130	6,1	5,5	B82432-A1154-+
180		0,1	35	0,796	120	6,9	5,0	B82432-A1184-+
220		0,1	30	0,796	115	7,5	4,6	B82432-A1224-+
270		0,1	30	0,796	90	12,5	4,4	B82432-A1274-+
330		0,1	30	0,796	85	14,1	4,1	B82432-A1334-+
390		0,1	35	0,796	80	15,3	3,8	B82432-A1394-+
470		0,1	35	0,796	75	17,5	3,5	B82432-A1474-+
560		0,1	30	0,796	70	23,0	2,8	B82432-A1564-+
680		0,1	30	0,796	65	25,0	2,6	B82432-A1684-+
820		0,1	30	0,796	60	28,0	2,5	B82432-A1824-+
1000		0,1	30	0,796	55	32,0	2,3	B82432-A1105-+

1) Closer tolerances and special versions upon request.

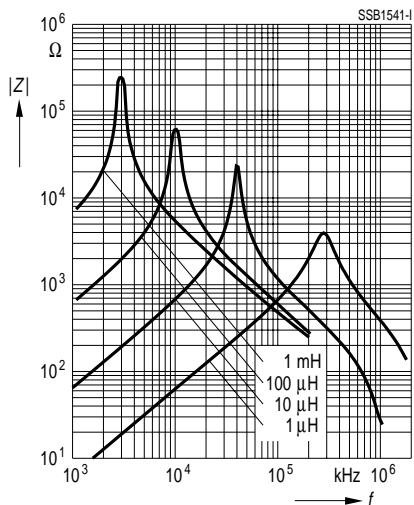
2) Replace the + by the code letter for the required inductance tolerance.



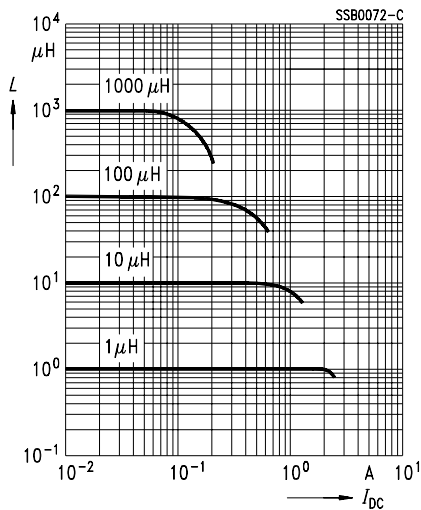
SMT Inductors, SIMID Series B82432-A  
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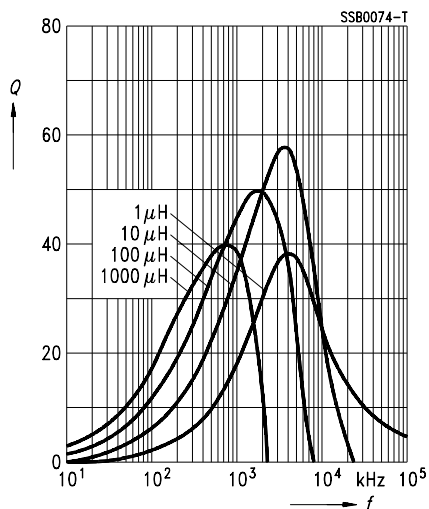
Impedance  $|Z|$   
 versus frequency  $f$   
 measured with impedance analyzer  
 HP 4291A



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



Q factor versus frequency  $f$   
 measured with impedance analyzer  
 HP 4194A



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

