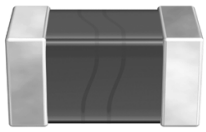
Size 0603 (EIA) and/or 1608 (IEC)
Rated inductance 1,0 to 220 nH
Rated current 0,11 to 1,8 A



Construction

- Copper-plated ceramic core
- Laser-cut winding, epoxy-coated

Features

- Extremely close tolerance of dimensions
- High resonance frequency
- Free of polarization effect
- Close inductance tolerance
- High mechanical stability
- Suitable for reflow (IR and vapor phase) and wave soldering

Applications

Resonant circuits, impedance matching for

- Mobile phones
- DECT systems
- Keyless entry
- GPS (Global Positioning System)
- Video cameras

Terminals

- Electro-plated, 2 µm Ni, 10 µm Sn (lead-free)
- Base material Al_2O_3 ceramic with Cu layer

Marking

No marking on component

Minimum data on reel:
Manufacturer, part number, ordering code,
L value and tolerance of *L* value,
quantity, date of packing

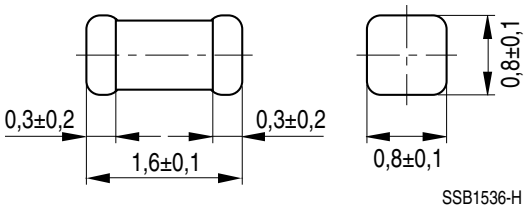
Delivery mode

8-mm cardboard tape, wound on 180-mm ∅ reel
Bulk case on request
For details on taping, packing and packing units refer to data book 2000 "Chokes and Inductors", page 151.

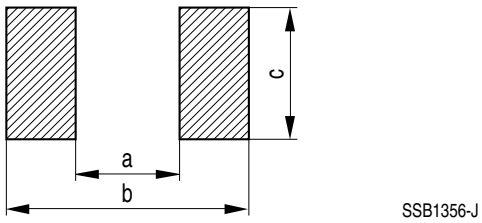
General technical data

Rated inductance L_R	Measured with impedance analyzer HP 4291A and Agilent test fixture 16196 A at frequency f_L
Q factor Q_{min}, Q_{typ}	Measured with impedance analyzer HP 4291A and Agilent test fixture 16196 A Q_{min} measured at frequency f_Q
Rated current I_R	Maximum permissible dc with a temperature increase of ≤ 15 K at rated temperature125 °C
Self-resonance frequency $f_{res, min}$	Measured with network analyzer HP 8720
DC resistance R_{max}	Measured at 20 °C ambient temperature, measuring current < I_R
Climatic category	55/125/56 (– 55 °C/+ 125 °C/56 days damp heat test) in accordance with IEC 60068-1
Solderability	(215 ± 3) °C, (3 ± 0,3) s wetting of soldering area: ≥ 95 % in accordance with IEC 60068-2-58
Resistance to soldering heat	260 °C, 10 s in accordance with IEC 60068-2-58 $\Delta L/L$: ≤ ± 3 %
Permissible PCB bending	2 mm (100 mm long standard PCB)
Weight	Approx. 4 mg

Dimensional drawing



Layout recommendation



Dimensions (mm)

a	*b*	*c*
0,9 ± 0,1	2,3 ± 0,3	0,8 ± 0,1

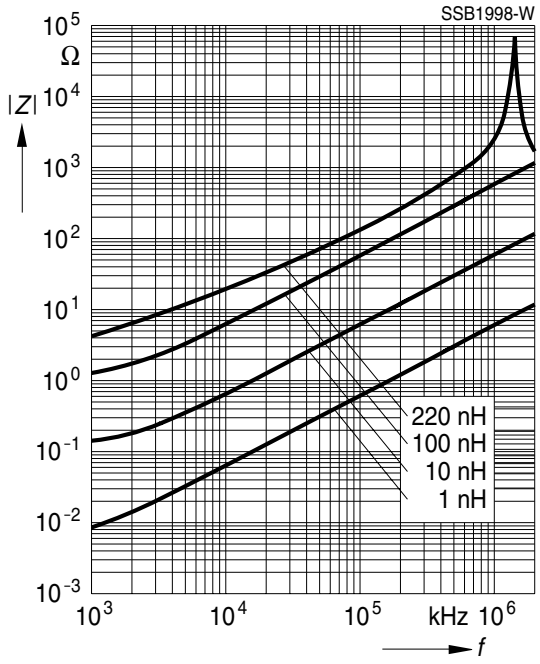
Characteristics and ordering codes

L_R nH	Tolerance	Q_{min}	Q_{typ} (at 800 MHz)	f_L; f_Q MHz	I_R A	R_{max} Ω	$f_{res,\ min}$ GHz	Ordering code[1)2)]
1,0	± 0,3 nH ≙ A	7	60	100	1,8	0,02	16	B82496C3109+
1,2		8	60	100	1,8	0,025	15	B82496C3129+
1,5	± 0,2 nH ≙ Z	8	50	100	1,5	0,03	13	B82496C3159+
1,8		12	50	100	1,5	0,033	12	B82496C3189+
2,2		14	50	100	1,5	0,035	10	B82496C3229+
2,7		14	40	100	1,4	0,04	10	B82496C3279+
3,3		14	40	100	1,2	0,06	9	B82496C3339+
3,9	± 5 % ≙ J	14	40	100	1,1	0,065	8	B82496C3399+
4,7		14	40	100	0,8	0,10	7	B82496C3479+
5,6	± 0,2 nH ≙ Z	14	40	100	0,7	0,15	6	B82496C3569+
6,8		14	40	100	0,7	0,15	6	B82496C3689+
8,2		14	40	100	0,65	0,18	6	B82496C3829+
10	± 5 % ≙ J	14	40	100	0,6	0,20	5	B82496C3100+
12		14	40	100	0,45	0,35	5	B82496C3120+
15	± 2 % ≙ G	14	40	100	0,42	0,40	4,5	B82496C3150+
18		14	40	100	0,40	0,45	4,0	B82496C3180+
22		14	40	100	0,38	0,50	4,0	B82496C3220+
27		14	35	100	0,36	0,55	3,0	B82496C3270+
33		14	35	100	0,35	0,60	3,0	B82496C3330+
39		14	35	100	0,30	0,80	2,5	B82496C3390+
47		14	35	100	0,27	0,95	2,5	B82496C3470+
56		14	35	100	0,25	1,2	2,5	B82496C3560+
68		14	35	100	0,23	1,3	2,0	B82496C3680+
82		14	35	100	0,22	1,5	2,0	B82496C3820+
100		14	30	100	0,20	1,8	1,8	B82496C3101+
120		5	30	25,2	0,16	3,0	1,8	B82496C3121+
150		5	30	25,2	0,13	5,0	1,6	B82496C3151+
180		4	25	25,2	0,12	6,0	1,4	B82496C3181+
220		4	25	25,2	0,11	7,0	1,3	B82496C3221+

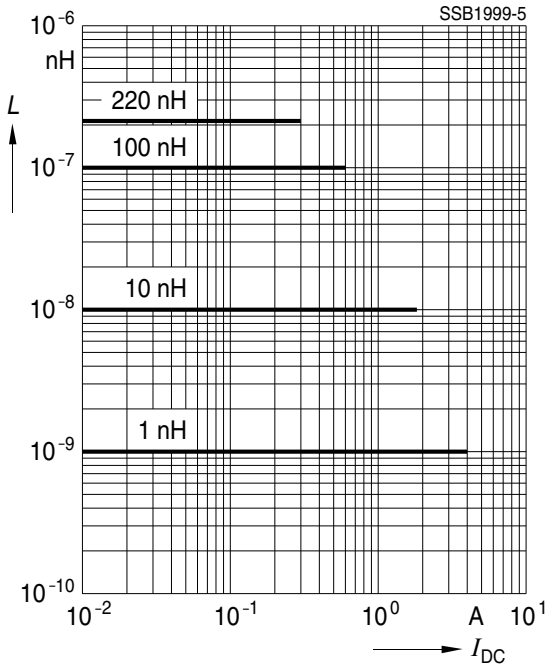
Special values available on request.

1) Replace the + by the code letter for the required inductance tolerance (see table).
2) Ordering code for cardboard tape/reel packing. For bulk case append code number »1«.
Example: B82496C3109A1

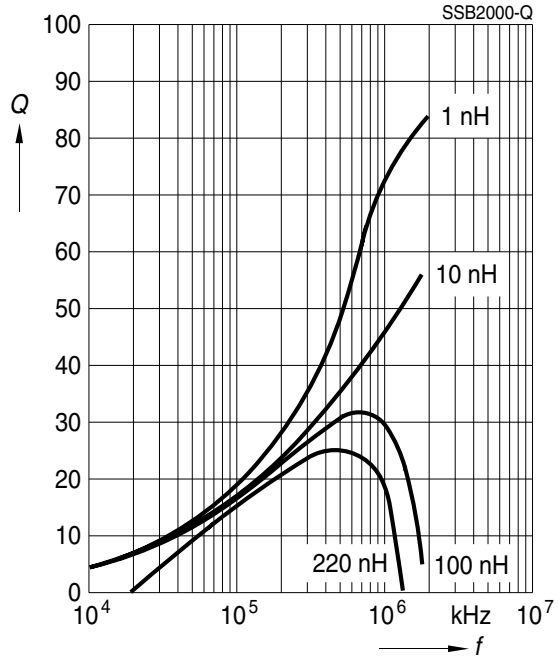
Impedance |*Z*|
versus frequency *f*
measured with impedance analyzer
HP 4291A/16196A



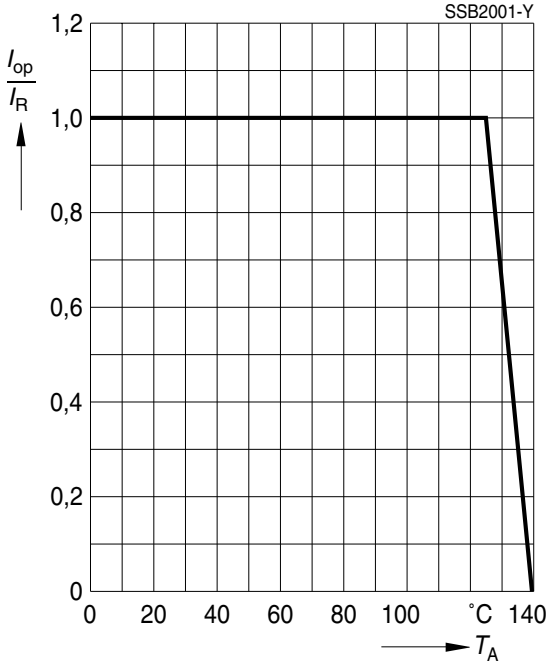
Inductance *L*
versus dc load current I_{DC}
measured with LCR meter
HP 4275A



Q factor versus frequency *f*
measured with impedance analyzer
HP 4291A/16196A



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



Published by EPCOS AG
Corporate Communications, P.O. Box 80 17 09, 81617 Munich, GERMANY
☎ ++49 89 636 09, FAX (0 89) 636-2 26 89

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.