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

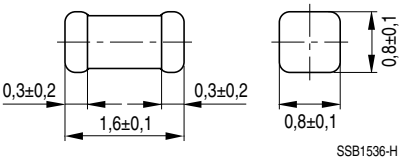
Delivery mode

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.

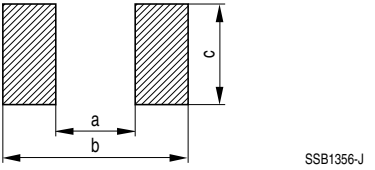
General technical data

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)

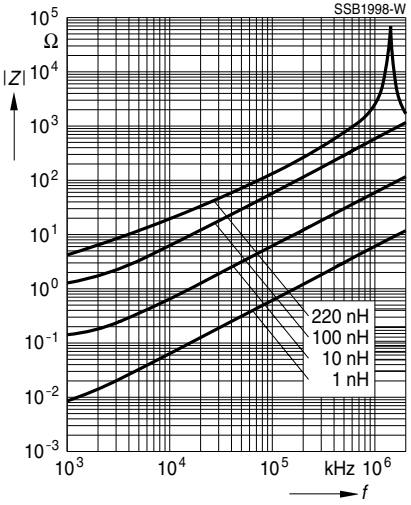
a	*b*	*c*
0,9 ± 0,1	2,3 ± 0,3	0,8 ± 0,1

Characteristics and ordering codes

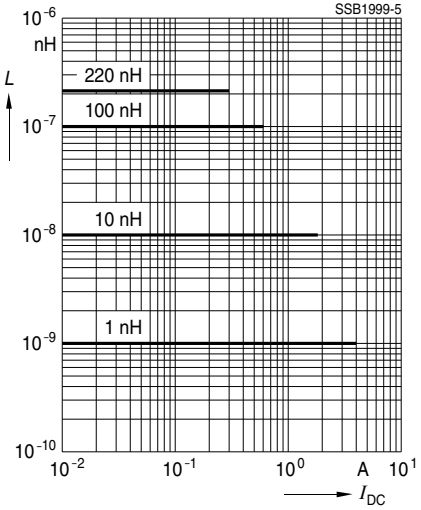
L_R nH	Tolerance	Q_{min}	Q_{typ} (at 800 MHz)	f_L; f_Q MHz	I_R A	R_{max} Ω	$f_{res,\ min}$ GHz	Ordering code[1)2)]
1,0	± 0,3 nH ≙ A	7	60	100	1,8	0,02	16	B82496-C3109-+
1,2		8	60	100	1,8	0,02	15	B82496-C3129-+
1,5	± 0,2 nH ≙ Z	8	50	100	1,5	0,03	13	B82496-C3159-+
1,8		12	50	100	1,5	0,03	12	B82496-C3189-+
2,2		14	50	100	1,5	0,03	10	B82496-C3229-+
2,7		14	40	100	1,5	0,03	10	B82496-C3279-+
3,3		14	40	100	1,2	0,05	9	B82496-C3339-+
3,9	± 5 % ≙ J	14	40	100	1,2	0,05	8	B82496-C3399-+
4,7		14	40	100	0,8	0,10	7	B82496-C3479-+
5,6	± 0,2 nH ≙ Z	14	40	100	0,7	0,15	6	B82496-C3569-+
6,8		14	40	100	0,7	0,15	6	B82496-C3689-+
8,2		14	40	100	0,7	0,15	6	B82496-C3829-+
10	± 5 % ≙ J	14	40	100	0,6	0,20	5	B82496-C3100-+
12		14	40	100	0,45	0,35	5	B82496-C3120-+
15	± 2 % ≙ G	14	40	100	0,42	0,40	4,5	B82496-C3150-+
18		14	40	100	0,40	0,45	4,0	B82496-C3180-+
22		14	40	100	0,38	0,50	4,0	B82496-C3220-+
27		14	35	100	0,36	0,55	3,0	B82496-C3270-+
33		14	35	100	0,35	0,60	3,0	B82496-C3330-+
39		14	35	100	0,30	0,80	2,5	B82496-C3390-+
47		14	35	100	0,27	0,95	2,5	B82496-C3470-+
56		14	35	100	0,25	1,2	2,5	B82496-C3560-+
68		14	35	100	0,23	1,3	2,0	B82496-C3680-+
82		14	35	100	0,22	1,5	2,0	B82496-C3820-+
100		14	30	100	0,20	1,8	1,8	B82496-C3101-+
120		5	30	25,2	0,16	3,0	1,8	B82496-C3121-+
150		5	30	25,2	0,13	5,0	1,6	B82496-C3151-+
180		4	25	25,2	0,12	6,0	1,4	B82496-C3181-+
220		4	25	25,2	0,11	7,0	1,3	B82496-C3221-+

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: B82496-C3109-A1

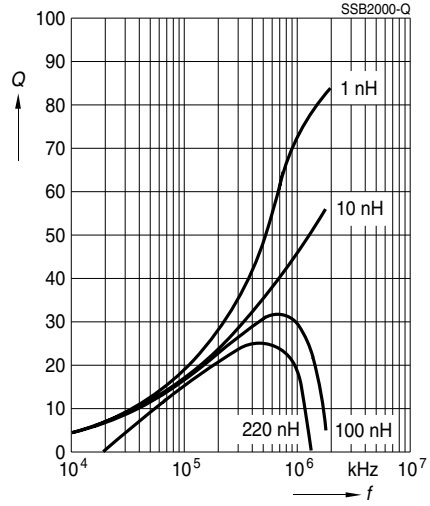
Impedance |*Z*|
versus frequency *f*
measured with impedance analyzer
HP 4291A/16196A



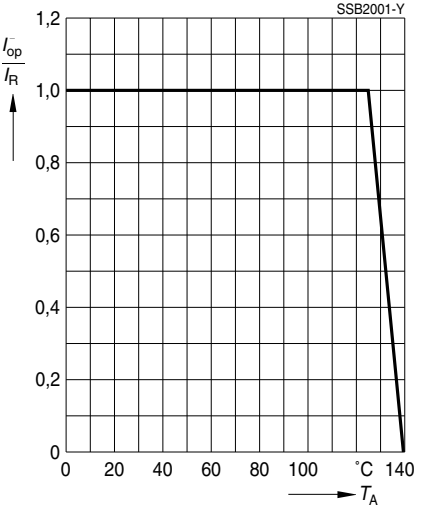
Inductance *L*
versus dc load current I_{DC}
measured with LCR meter
HP 4275A



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



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



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