SIMID 02-100 (Siemens Miniature Inductors)
European standard
Rated inductance 0,0082 to 100 µH
Rated current 0,065 to 0,8 A

Construction

- Size as per EIA standard: 1210
- Ceramic or ferrite core
- Winding laser-welded, flame-retardant encapsulation
- Temperature index of wire enamel: 180 °C

Features

- High *Q* factor
- High resonance frequency
- Suitable for reflow (IR and vapor phase) and wave soldering
- Different measuring frequencies for *L* and *Q*

Applications

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

Terminals

- Tinned
- Base material: CuSn6, 0,4 µm Cu, 0,1µm Ni, 5–7 µm Sn
- Suitable for soldering and conductive adhesion
- No leaching during wave soldering

Marking

Marking on component:
Manufacturer,
L value (in nH) and tolerance of *L* value (coded),
date of manufacture (coded)

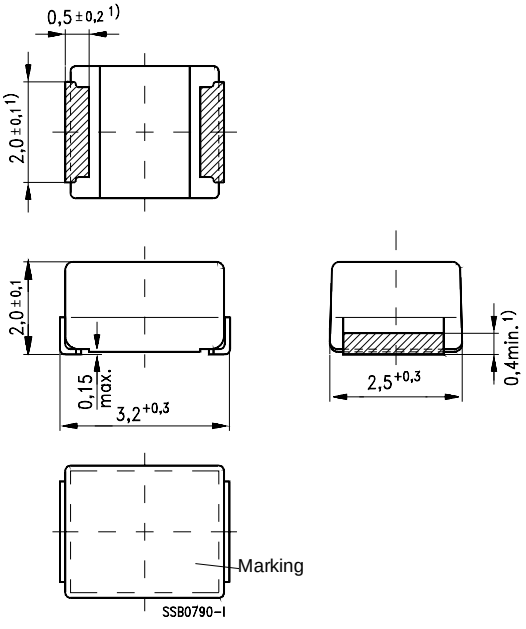
Minimum marking on reel:
Manufacturer, part number, ordering code,
L value and tolerance of *L* value,
quantity, date of packing

Delivery mode

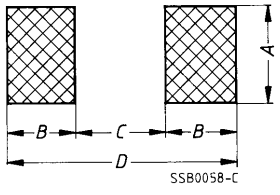
8-mm blister tape wound on 180-mm or 330-mm ∅ reel
For details on taping, packing and packing units see page 433.

Outline drawing

EIA size 1210,
approx. weight 50 mg



PCB layout recommendation



Dimensions (mm)	*A*	*B*	*C*	*D*
Wave soldering	2,3	1,60	2,1	5,3
Reflow soldering	2,7	1,15	2,1	4,4

1) Soldering area, tinned

Characteristics and ordering codes

For further technical data see page 54.

L_R µH	Tolerance[1)]	f_L MHz	Q_{min}	f_Q MHz	I_R mA	R_{max} Ω	$f_{res,\ min}$ MHz	Ordering code [2)] (180-mm ∅ reel)
Core material: ceramics								
0,0082	± 5 %	10	20	100	800	0,08	2500	B82422-A3829-+100
0,010	≙ J	10	20	100	750	0,09	2500	B82422-A3100-+100
0,012	± 10 %	10	25	100	700	0,10	2500	B82422-A3120-+100
0,015	≙ K	10	27	100	640	0,12	2500	B82422-A3150-+100
0,018	± 20 %	10	30	100	640	0,12	2500	B82422-A3180-+100
0,022	≙ M	10	30	100	600	0,14	2500	B82422-A3220-+100
0,027		10	23	50	600	0,14	1850	B82422-A3270-+100
0,033		10	20	50	540	0,17	1700	B82422-A3330-+100
0,039		10	25	50	530	0,18	1450	B82422-A3390-+100
0,047		10	26	50	510	0,19	1350	B82422-A3470-+100
0,056		10	26	50	500	0,20	1200	B82422-A3560-+100
0,068		10	27	50	480	0,21	1150	B82422-A3680-+100
0,082		10	27	50	450	0,24	1050	B82422-A3820-+100
0,10		10	25	50	440	0,26	1000	B82422-A3101-+100
0,12		1	22	30	400	0,32	880	B82422-A3121-+100
0,15		1	25	30	390	0,33	850	B82422-A3151-+100
0,18		1	25	30	360	0,38	800	B82422-A3181-+100
0,22		1	25	30	280	0,64	700	B82422-A3221-+100
0,27		1	20	30	235	0,90	650	B82422-A3271-+100
0,33		1	22	30	200	1,3	580	B82422-A3331-+100
0,39		1	22	30	190	1,4	540	B82422-A3391-+100
0,47		1	22	30	150	2,2	480	B82422-A3471-+100
0,56		1	22	30	150	2,2	400	B82422-A3561-+100
0,68		1	22	30	145	2,4	180	B82422-A3681-+100
0,82		1	22	30	140	2,5	160	B82422-A3821-+100

1) Closer tolerances and special versions upon request.
2) Replace the + by the code letter for the required inductance tolerance
For reel size ∅ 330 mm append code number "8". Example: B82422-A3829-K108

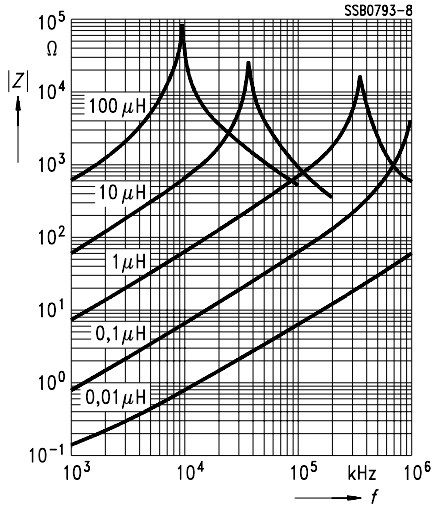
Characteristics and ordering codes

For further technical data see page 54.

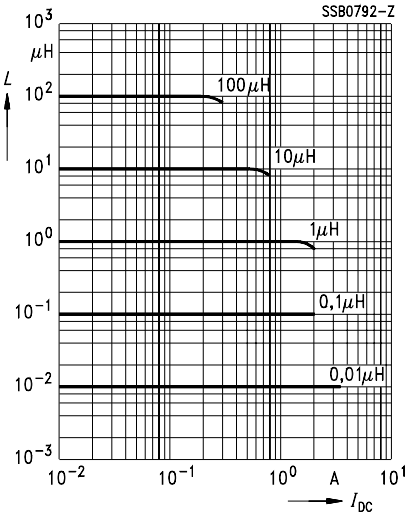
L_R µH	Tolerance[1)]	f_L MHz	Q_{min}	f_Q MHz	I_R mA	R_{max} Ω	$f_{res,\ min}$ MHz	Ordering code [2)] (180-mm ∅ reel)
Core material: ferrite								
1,0	± 5 %	1	20	7,96	380	0,34	320	B82422-A1102-+100
1,2	≙ J	1	20	7,96	370	0,37	300	B82422-A1122-+100
1,5	± 10 %	1	20	7,96	340	0,42	270	B82422-A1152-+100
1,8	≙ K	1	25	7,96	290	0,60	250	B82422-A1182-+100
2,2	± 20 %	1	25	7,96	270	0,75	125	B82422-A1222-+100
2,7	≙ M	1	25	7,96	240	0,88	110	B82422-A1272-+100
3,3		1	27	7,96	200	1,20	110	B82422-A1332-+100
3,9		1	27	7,96	190	1,40	110	B82422-A1392-+100
4,7		1	27	7,96	150	2,20	110	B82422-A1472-+100
5,6		1	27	7,96	140	2,60	100	B82422-A1562-+100
6,8		1	27	7,96	135	2,80	90	B82422-A1682-+100
8,2		1	27	7,96	130	3,00	90	B82422-A1822-+100
10		1	27	2,52	180	1,60	25	B82422-A1103-+100
12		0,1	27	2,52	175	1,65	23	B82422-A1123-+100
15		0,1	27	2,52	165	1,85	20	B82422-A1153-+100
18		0,1	27	2,52	155	2,00	17	B82422-A1183-+100
22		0,1	27	2,52	140	2,65	16	B82422-A1223-+100
27		0,1	27	2,52	120	3,70	15	B82422-A1273-+100
33		0,1	27	2,52	105	4,50	13	B82422-A1333-+100
39		0,1	27	2,52	90	6,30	12	B82422-A1393-+100
47		0,1	27	2,52	85	7,00	11	B82422-A1473-+100
56		0,1	27	2,52	85	6,75	9	B82422-A1563-+100
68		0,1	27	2,52	80	7,70	9	B82422-A1683-+100
82		0,1	27	2,52	70	10,0	8	B82422-A1823-+100
100		0,1	27	2,52	65	11,5	7	B82422-A1104-+100

11) Closer tolerances and special versions upon request.
2) Replace the + by the code letter for the required inductance tolerance
For reel size ∅ 330 mm insert code number "8". Example: B82422-A1102-K108

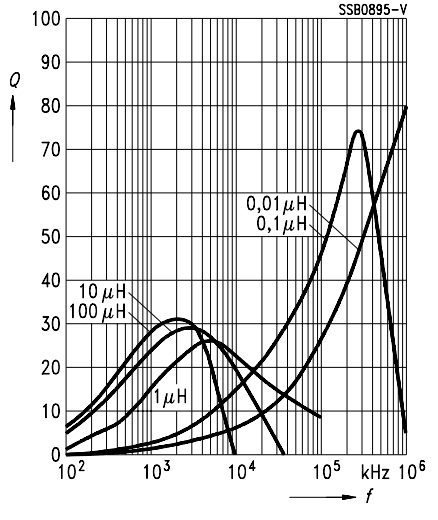
Impedance $|Z|$
versus frequency f
measured with impedance analyzer
HP 4191A / HP 4194A



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



Q factor
versus frequency f
measured with impedance analyzer
HP 4191A / HP 4194A



Current derating I_{op}/I_R
versus ambient temperature T_A
(Rated temperature T_R = 105 °C)