



SMT Inductors, SIMID Series

B82422-A****-+100

SIMID 1210-100

SMD

Size 1210 (EIA) or 3225 (IEC)
Rated inductance 0,0082 to 100 μ H
Rated current 65 to 800 mA



Construction

- Ceramic or ferrite core
- Laser-welded winding
- Flame-retardant encapsulation

Features

- Very wide temperature range (up to 145 °C)
- 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

- Electro-plated
- 0,4 μ m Cu, 1–2 μ m Ag, 5–7 μ m Sn
- Base material CuSn6
- 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 data 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 $\varnothing$ reel

For details on taping, packing and packing units see page 153



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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/HP 4291A at frequency f_Q
Rated current I_R	Maximum permissible dc with inductance decrease $\Delta L/L_0 \leq 10\%$ and temperature increase of $\leq 20\text{ K}$ at rated temperature of 125°C
Self-resonance frequency $f_{\text{res, min}}$	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 ($-55^\circ\text{C}/+125^\circ\text{C}/56$ days damp heat test)
Solderability	In accordance with IEC 60068-2-58 ($215 \pm 3^\circ\text{C}$, $(3 \pm 0,3)\text{ s}$) Wetting of soldering area: $\geq 90\%$
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. 50 mg



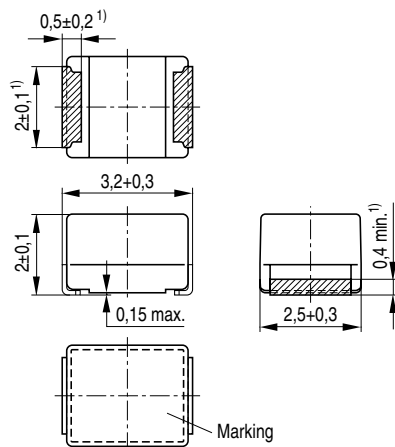
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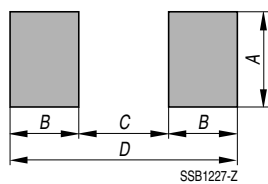
Dimensional drawing



¹⁾ Soldering area, tinned

IND0063-T-E

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



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Characteristics and ordering codes

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⁾ ($\varnothing$ 180-mm reel)
Core material: ceramics								
0,0082	$\pm 5\%$	10	20	100	800	0,08	4000	B82422-A3829-+100
0,010	$\triangle J$	10	20	100	750	0,09	4000	B82422-A3100-+100
0,012	$\pm 10\%$	10	25	100	700	0,10	3500	B82422-A3120-+100
0,015	$\triangle K$	10	27	100	640	0,12	3000	B82422-A3150-+100
0,018		10	30	100	640	0,12	2500	B82422-A3180-+100
0,022		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	280	B82422-A3681-+100
0,82		1	22	30	140	2,5	240	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 $\varnothing$ 330 mm append code number »8«. Example: B82422-A3829-K108



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Characteristics and ordering codes (continued)

L_R μH	Tolerance ¹⁾	f_L MHz	$Q_{\min}$	f_Q MHz	I_R mA	$R_{\max}$ Ω	$f_{\text{res, min}}$ MHz	Ordering code ²⁾ ($\varnothing$ 180-mm reel)
Core material: ferrite								
1,0	$\pm 5\%$	1	20	7,96	380	0,34	320	B82422-A1102-+100
1,2	$\triangleq J$	1	20	7,96	370	0,37	300	B82422-A1122-+100
1,5	$\pm 10\%$	1	20	7,96	340	0,50	270	B82422-A1152-+100
1,8	$\triangleq K$	1	25	7,96	290	0,60	250	B82422-A1182-+100
2,2		1	25	7,96	270	0,75	125	B82422-A1222-+100
2,7		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

1) Closer tolerances and special versions upon request.

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

For reel size $\varnothing$ 330 mm append code number »8«. Example: B82422-A1102-K108



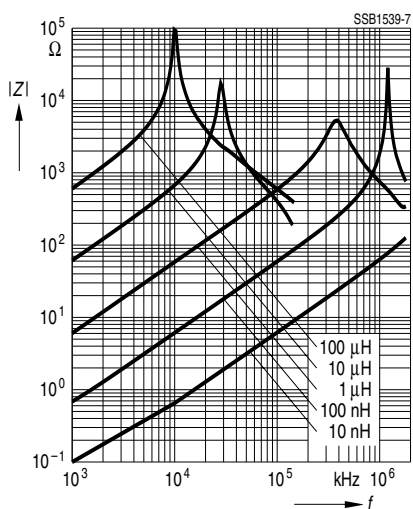
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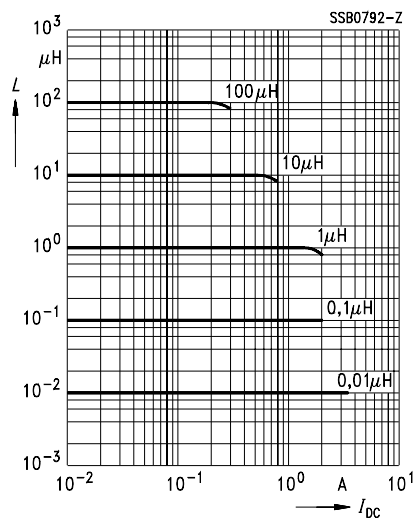
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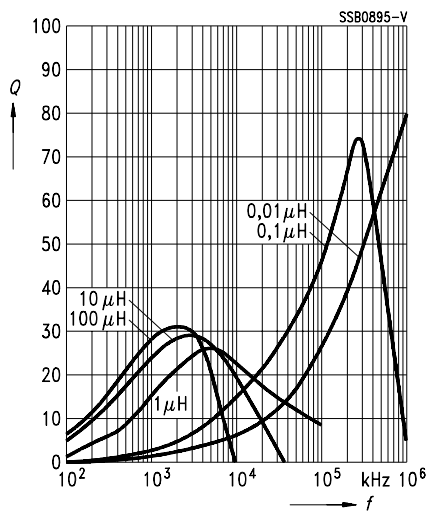
Impedance $|Z|$
versus frequency f
measured with impedance analyzer
HP 4291A



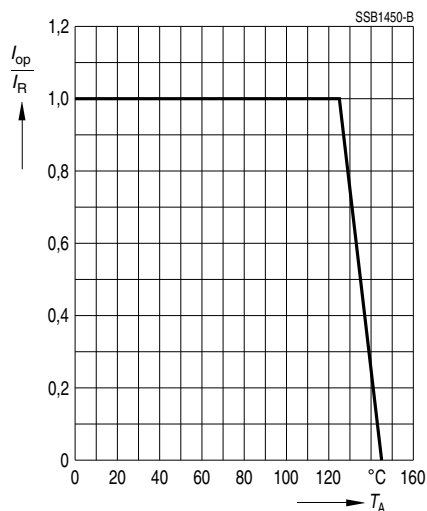
Inductance L
versus dc load current I_{DC}
measured with LCR meter
HP 4275A



Q factor versus frequency f
measured with impedance analyzer
HP 4194A / HP 4291A



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



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