

EMI SUPPRESSION CHOKES

SIMID 02

B 82422

Chip inductors for surface mounting (SMD)

Rated voltage 0.065 to 0.7 A

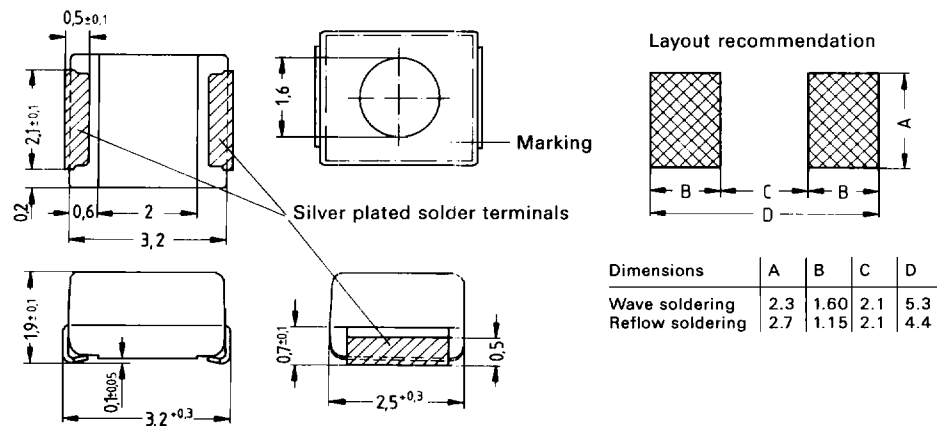
SIMID 02 series (Siemens Miniature Inductors)

Miniature chip chokes, encapsulated (flame-retardant), with high-temperature-resistant copper winding and a cube-shaped core made of ceramic or ferrite. The winding is lacquer-coated and the wire ends are welded to contact elements (CuSn6) at the face ends of the inductor, with the welded joints being protected by an epoxy resin adhesive.

Chip chokes are intended for automatic placement and all soldering methods.

Due to their special design they are particularly suitable for use in RF circuits such as tuners in car radios, TV sets and video recorders or for application in mobile phones and antenna amplifiers.

Quality assessment in accordance with CECC and VG standards in preparation.



Technical data

Dimensions $l \times w \times h$ (mm)	$3.2 \times 2.5 \times 2.0$
size as per EIA	1210
Rated inductance	0.01 μ H to 100 μ H
	Measuring frequency 1 MHz for $L \leq 10 \mu$ H
	100 kHz for $L > 10 \mu$ H
Rated current	referred to 40 °C ambient temperature
DC resistance	measured at 20 °C
Quality	measured with impedance analyzer HP 4194 A
Resonant frequency	measured with scalar network analyzer ZAS by Rhode & Schwarz
DIN climatic category (DIN 40 040)	FKF (-55 °C to +125 °C, humidity category E)
IEC climatic category (IEC 68)	55/125/56
Permissible soldering methods	Wave soldering, vapor phase soldering and other reflow methods
Solderability	
215 °C \pm 3 °C, 3 \pm 0.3 s	> 95 % wetting of solder terminals
Resistance to soldering heat	
complies with test Tb, DIN IEC 68-2-20	260 °C, 10 s
Permissible bending of PC board	
	2 mm (standard PC board, 100 mm in length)
Marking on component	
	Inductance and tolerance (correspond to the last four digits of the ordering code)

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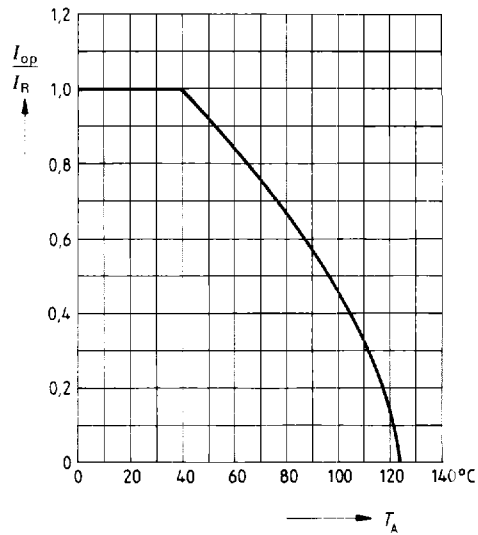
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Inductance L μH	Tolerance	Quality at measuring frequency		Rated current I_R mA	DC resistance R_{max} Ω	Resonant frequency f_{min} MHz	Ordering code VE 2000	Carrier material
		Q_{min}	MHz					
0.010	$\pm 20\%$ $\triangle "M"$	20	100	700	0.10	2000	B82422-A3100-M	Ceramic
0.012		25	100	700	0.10	2000	B82422-A3120-M	
0.015		25	100	640	0.12	2000	B82422-A3150-M	
0.018		30	100	640	0.12	2000	B82422-A3180-M	
0.022		30	100	570	0.15	2000	B82422-A3220-M	
0.027		20	50	570	0.15	1900	B82422-A3270-M	
0.033		20	50	530	0.19	1900	B82422-A3330-M	
0.039		25	50	530	0.19	1450	B82422-A3390-M	
0.047		25	50	480	0.21	1350	B82422-A3470-M	
0.056		25	50	470	0.23	1300	B82422-A3560-M	
0.068	$\pm 10\%$ $\triangle "K"$ or $\pm 20\%$ $\triangle "M"$	25	50	440	0.26	1250	B82422-A3680-*	Ferrite
0.082		25	50	415	0.29	1150	B82422-A3820-*	
0.10		25	50	400	0.30	1000	B82422-A3101-*	
0.12		20	30	390	0.33	880	B82422-A3121-*	
0.15		20	30	360	0.38	850	B82422-A3151-*	
0.18		20	30	345	0.42	800	B82422-A3181-*	
0.22		20	30	280	0.64	700	B82422-A3221-*	
0.27		20	30	250	0.76	650	B82422-A3271-*	
0.33		20	30	200	1.20	580	B82422-A3331-*	
0.39		20	30	180	1.50	540	B82422-A3391-*	
0.47		20	30	150	2.20	480	B82422-A3471-*	
0.56		20	30	145	2.40	440	B82422-A3561-*	
0.68		20	30	140	2.70	400	B82422-A3681-*	
0.82		20	30	135	3.00	350	B82422-A3821-*	
1.0	$\pm 10\%$ $\triangle "K"$ or $\pm 20\%$ $\triangle "M"$	20	7.96	380	0.34	320	B82422-A1102-*	Ferrite
1.2		20	7.96	370	0.37	300	B82422-A1122-*	
1.5		20	7.96	340	0.42	270	B82422-A1152-*	
1.8		25	7.96	290	0.60	250	B82422-A1182-*	
2.2		25	7.96	270	0.70	230	B82422-A1222-*	
2.7		25	7.96	240	0.88	210	B82422-A1272-*	
3.3		25	7.96	200	1.20	180	B82422-A1332-*	
3.9		25	7.96	175	1.65	165	B82422-A1392-*	
4.7		25	7.96	150	2.20	145	B82422-A1472-*	
5.6		25	7.96	140	2.60	135	B82422-A1562-*	
6.8		25	7.96	135	2.80	115	B82422-A1682-*	
8.2		25	7.96	130	3.00	85	B82422-A1822-*	
10		25	2.52	180	1.60	21	B82422-A1103-*	
12		25	2.52	175	1.65	18.5	B82422-A1123-*	
15		25	2.52	165	1.85	17.5	B82422-A1153-*	
18		25	2.52	155	2.00	15.5	B82422-A1183-*	
22		25	2.52	145	2.50	14.0	B82422-A1223-*	
27		25	2.52	120	3.70	14.0	B82422-A1273-*	
33		25	2.52	110	4.40	11.5	B82422-A1333-*	
39		25	2.52	90	6.30	9.0	B82422-A1393-*	
47		25	2.52	85	7.00	8.0	B82422-A1473-*	
56		25	2.52	80	6.75	8.0	B82422-A1563-*	
68		25	2.52	80	7.70	7.5	B82422-A1683-*	
82		20	2.52	70	10.00	6.5	B82422-A1823-*	
100	20	2.52	65	11.50	6.0	B82422-A1104-*		

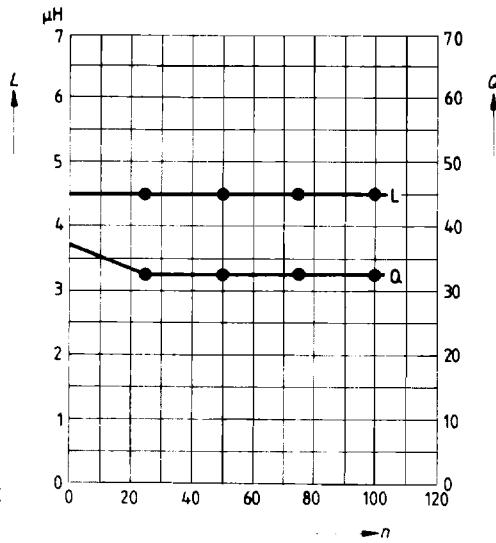
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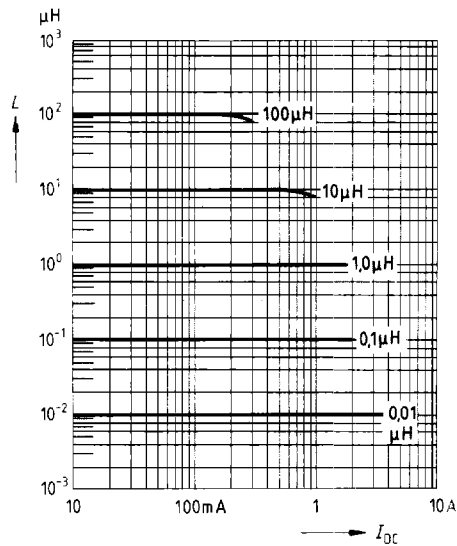
Current handling capability I_{op}/I_R
versus ambient temperature T_A



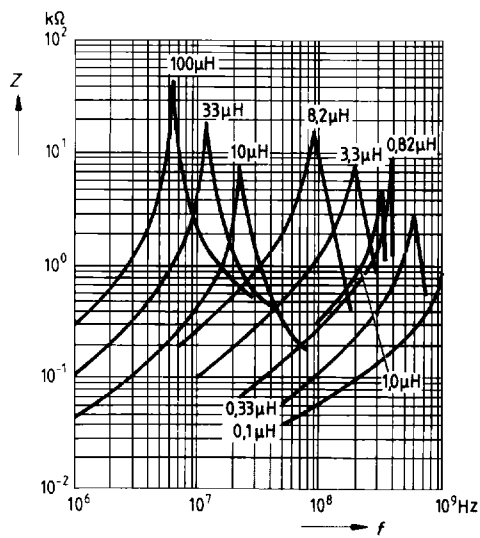
Inductance L and quality Q
versus number n of dip soldering
procedures (240 °C, 5 s)



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

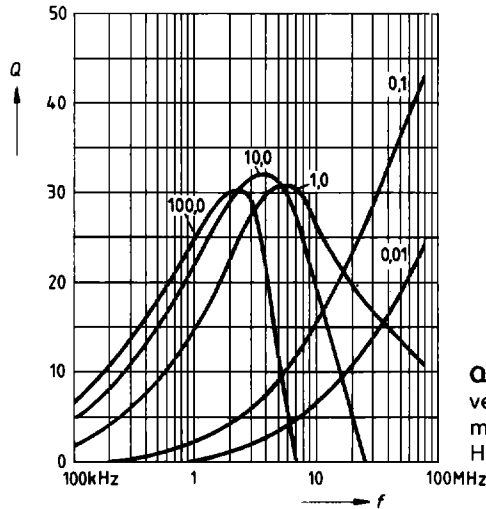


Impedance Z
versus frequency f ;
measured with vector analyzer ZPV



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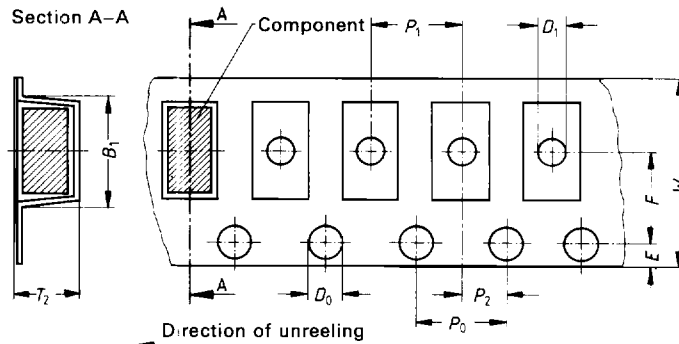
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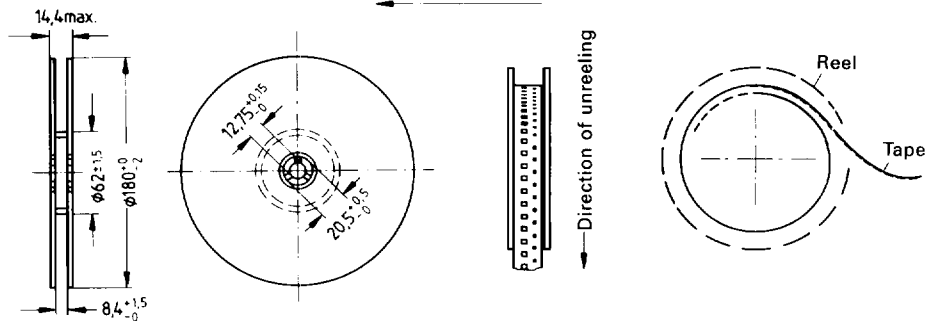
Quality Q
versus frequency f ;
measured with impedance analyzer
HP 4194A

Tape packaging in accordance with IEC 286-3

Dimensions	mm
W	8 ± 0.3
P_0	4 ± 0.1
D_0	1.5 ± 0.1
E	1.75 ± 0.1
F	3.5 ± 0.05
P_2	2 ± 0.05
P_1	4 ± 0.1
D_1	1.0 ± 0.2
T_2	≤ 2.6
B_1	≤ 4.2



Packing



Marking: Inductance and tolerance \triangleq last 4 digits of ordering code