

EMI SUPPRESSION CHOKES

SIMID 01

B 82412

Chip inductors for surface mounting (SMD)

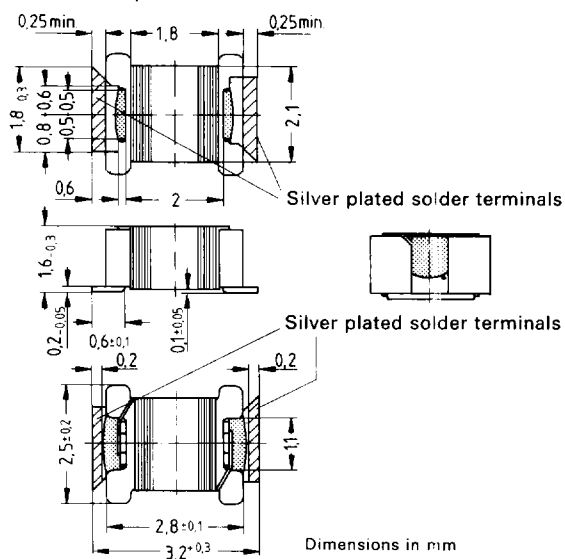
Rated voltage 0.09 to 0.6 A

SIMID 01 series (Siemens Miniature Inductors)

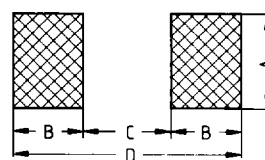
Miniature chip chokes with high-temperature-resistant, single-layer copper winding and a cube-shaped core made of ceramic or ferrite. The winding is lacquer-coated and the wire ends are welded to contact elements (CuSn6) at the face ends of the inductor, with the welded joints being protected by an epoxy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

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.



Layout recommendation



Dimensions	A	B	C	D
Wave soldering	2.3	1.60	2.1	5.3
Reflow soldering	2.7	1.15	2.1	4.4

Technical data

Dimensions $l \times w \times h$ (mm) as per EIA	3.2 × 2.5 × 1.6 1210
Rated inductance at measuring frequency	0.022 μ H to 10 μ H 1 MHz
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 F)
IEC climatic category (IEC 68)	55/125/56

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Permissible soldering methods Wave soldering, vapor phase soldering and other reflow methods

Solderability
215 °C ± 3 °C, 3 ± 0.3 s > 95% of solder terminals wetted

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)

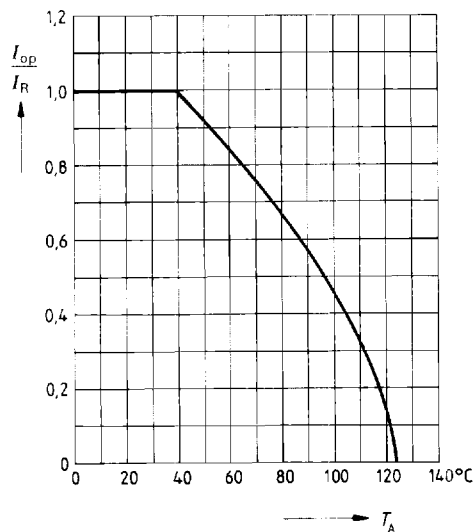
Inductance L μH	Tolerance	Quality at measuring frequency $Q_{\min}$ MHz		Rated current I_R mA	DC resistance $R_{\max}$ Ω	Resonant frequency $f_{\min}$ MHz	Ordering code	Carrier material
0.022 0.027	± 20% ▲ "M"	30 20	100 50	600 600	0.12 0.13	2000 2000	B82412-A3220-M B82412-A3270-M	Ceramic
0.033	± 10% ▲ "K"	25	50	540	0.17	2000	B82412-A3330-*	
0.039		25	50	500	0.18	1600	B82412-A3390-*	
0.047		25	50	470	0.22	1600	B82412-A3470-*	
0.056		30	50	460	0.23	1400	B82412-A3560-*	
0.068		30	50	440	0.25	1350	B82412-A3680-*	
0.082		30	50	430	0.27	1000	B82412-A3820-*	
0.10	± 20% ▲ "M"	30	50	400	0.30	1000	B82412-A3101-*	
0.12		25	30	380	0.35	900	B82412-A3121-*	
0.15		25	30	370	0.36	820	B82412-A3151-*	
0.18		25	30	340	0.42	700	B82412-A3181-*	
0.22		25	30	320	0.48	630	B82412-A3221-*	
0.27	± 10% ▲ "K"	30	30	300	0.55	570	B82412-A3271-*	
0.33		30	30	280	0.65	550	B82412-A3331-*	
0.39		30	30	260	0.70	500	B82412-A3391-*	
0.47		30	30	225	1.00	450	B82412-A3471-*	
0.56		30	30	200	1.20	430	B82412-A3561-*	
0.68		30	30	180	1.40	400	B82412-A3681-*	
0.82		30	30	150	2.00	380	B82412-A3821-*	
1.0		30	7.96	330	0.45	300	B82412-A1102-*	Ferrite
1.2		30	7.96	310	0.50	260	B82412-A1122-*	
1.5		30	7.96	300	0.55	240	B82412-A1152-*	
1.8		30	7.96	290	0.60	220	B82412-A1182-*	
2.2		30	7.96	270	0.65	200	B82412-A1222-*	
2.7		30	7.96	220	1.05	180	B82412-A1272-*	
3.3		30	7.96	200	1.10	160	B82412-A1332-*	
3.9		30	7.96	190	1.35	150	B82412-A1392-*	
4.7		35	7.96	160	1.80	140	B82412-A1472-*	
5.6		35	7.96	140	2.70	125	B82412-A1562-*	
6.8		35	7.96	120	3.50	115	B82412-A1682-*	
8.2		35	7.96	110	3.80	100	B82412-A1822-*	
10.0		35	7.96	90	5.50	95	B82412-A1103-*	

* Replace the asterisk by the code letter for tolerance "K" ▲ ± 10% or "M" ▲ ± 20%,
± 5% inductance tolerance upon request.

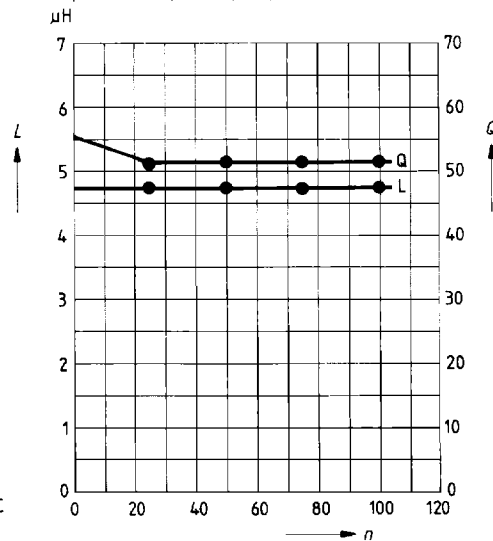
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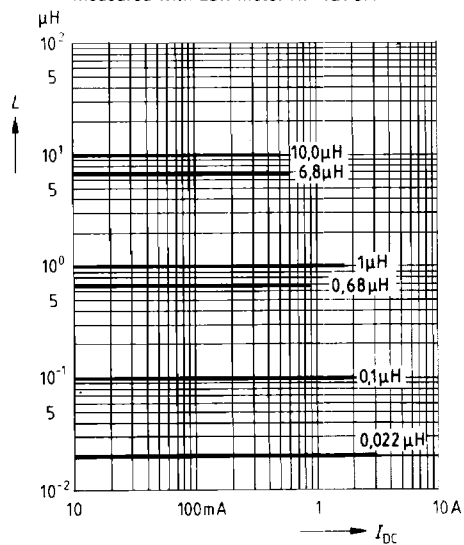
Current handling capability I_{OP}/I_R
versus ambient temperature T_A



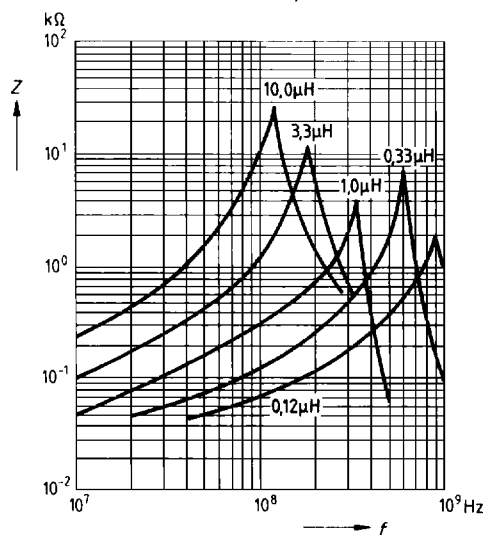
Inductance L and quality Q
versus number n of dip soldering
procedures (240 °C, 5 s)



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



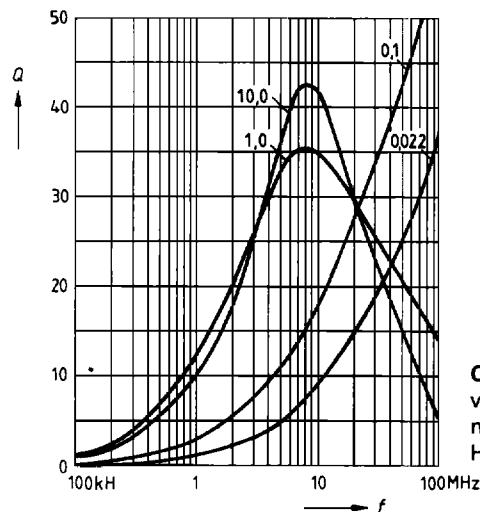
Impedance Z
versus frequency f :
measured with vector analyzer ZPV



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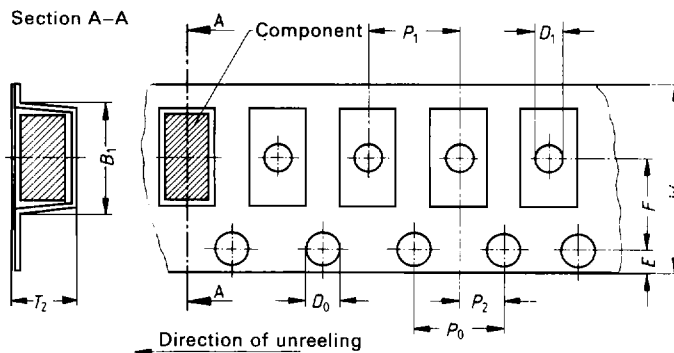
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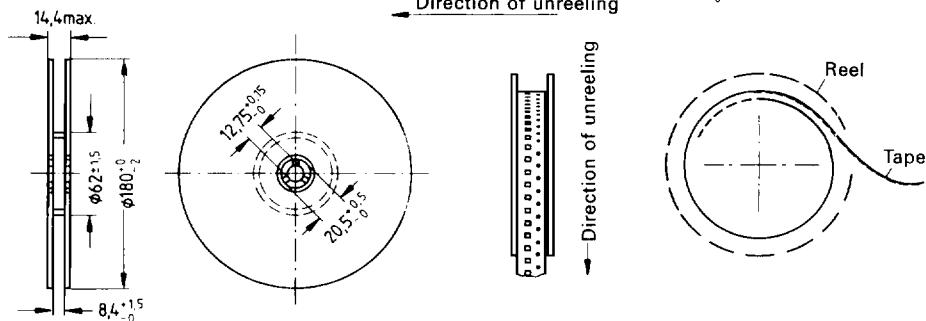
Quality Q
versus frequency f ;
measured with impedance analyzer
HP 4194A

Tape packaging in accordance with IEC 286-3

Dimension	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	≤ 2.0
B_1	≤ 4.2



Packing



Marking on blister tape: Inductance and tolerance Δ last 4 digits of ordering code
Marking on packing: Inductance and tolerance in clear text