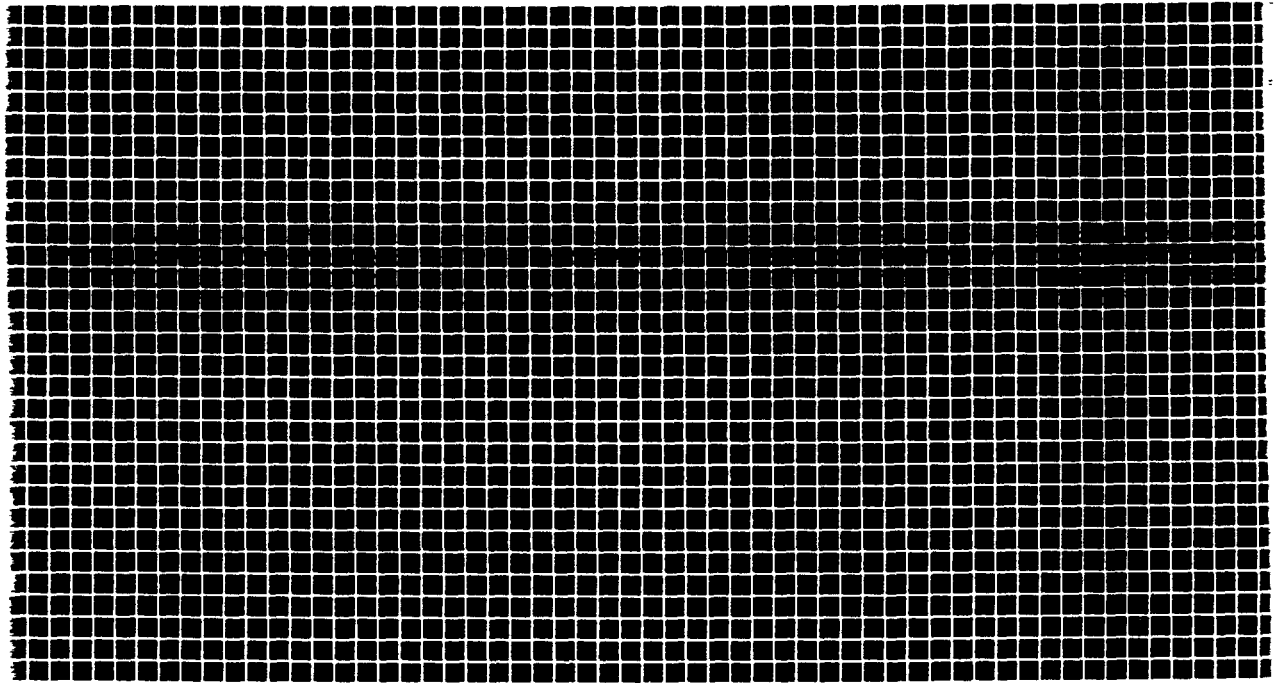



Siemens Matsushita Components



# HF Chokes

B 82 422 

\*SIEMSO18\*

Data Book Supplement

**Chip inductors for surface mounting**  
SIMID 02 series with tinned terminals

Rated current 0.065 to 0.8 A

**Construction**

- Miniature chip chokes with flame-retardant encapsulation
- Core made of ceramic or ferrite material
- Wound with highly temperature-stable enamel copper wire; the winding ends are welded to the contact elements, which are glue-bonded to the face ends

**Features**

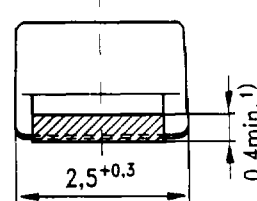
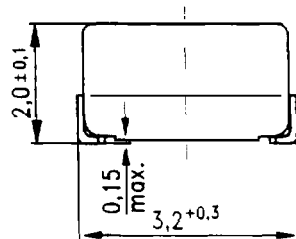
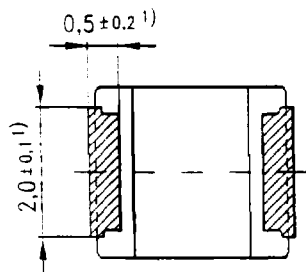
- Suitable for automatic placement
- Suitable for all soldering methods
- Supply on blister tape (reel packing)

**Application examples**

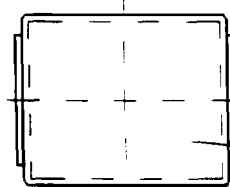
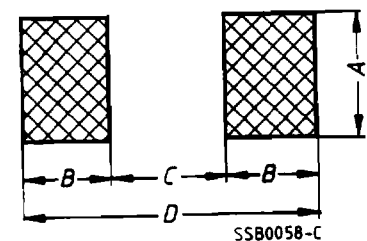
Use in HF circuits (e.g. tuners in car radios, TV sets, video recorders) as well as in mobile telephones and antenna amplifiers

**Approvals**

to CECC and VG standard pending



Layout recommendation



Marking  
1) Soldering area, tinned

SSB0790-I

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

**Technical data**

Dimensions $l \times b \times h$ (mm)	3.2 × 2.5 × 2.0
Size as per EIA standard	1210
Rated inductance	0.0082 $\mu$ H to 100 $\mu$ H measuring frequency 10 MHz for $L \leq 0.1 \mu$ H 1 MHz for $0.1 \mu$ H < $L \leq 10 \mu$ 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
Resonance frequency	measured with scalar network analyzer ZAS from Rohde & Schwarz
IEC climatic category	55/125/56
Soldering methods	wave soldering, reflow soldering, vapor phase soldering
Solderability: 215 °C $\pm$ 3 °C, 3 $\pm$ 0.3 s	$\geq$ 95 % wetting of soldering area
Resistance to soldering heat analog to test Tb, IEC 68-2-20	260 °C, 10 s
Permissible bending of PCB	2 mm (100 mm long standard PCB)
Marking on component	S + M inductance in nH and tolerance
Weight	approx. 46 mg

Inductance $L$ $\mu\text{H}$	Tolerance	Q at meas. frequency		Rated current	DC resistance	Resonance frequency	Ordering code <sup>1)</sup> PU = 2000 pieces	Core material
		$Q_{\min}$	MHz	$I_N$ mA	$R_{\max}$ $\Omega$	$f_{\min}$ MHz		
0.0082		20	100	800	0.08	2500	B82422-A3829-+100	Cera- mics
0.010		20	100	750	0.09	2500	B82422-A3100-+100	
0.012		25	100	700	0.10	2500	B82422-A3120-+100	
0.015		27	100	640	0.12	2500	B82422-A3150-+100	
0.018		30	100	640	0.12	2500	B82422-A3180-+100	
0.022		30	100	600	0.14	2500	B82422-A3220-+100	
0.027		23	50	600	0.14	1850	B82422-A3270-+100	
0.033		20	50	540	0.17	1700	B82422-A3330-+100	
0.039		25	50	530	0.18	1450	B82422-A3390-+100	
0.047		26	50	510	0.19	1350	B82422-A3470-+100	
0.056	$\pm 10\%$	26	50	500	0.20	1200	B82422-A3560-+100	
0.068	or	27	50	480	0.21	1150	B82422-A3680-+100	
0.082	$\pm 20\%$	27	50	450	0.24	1050	B82422-A3820-+100	
0.10		25	50	440	0.26	1000	B82422-A3101-+100	
0.12		22	30	400	0.32	880	B82422-A3121-+100	
0.15		25	30	390	0.33	850	B82422-A3151-+100	
0.18		25	30	360	0.38	800	B82422-A3181-+100	
0.22		25	30	280	0.64	700	B82422-A3221-+100	
0.27		20	30	235	0.90	650	B82422-A3271-+100	
0.33		22	30	200	1.3	580	B82422-A3331-+100	
0.39		22	30	190	1.4	540	B82422-A3391-+100	
0.47		22	30	150	2.2	480	B82422-A3471-+100	
0.56		22	30	150	2.2	200	B82422-A3561-+100	
0.68		22	30	145	2.4	180	B82422-A3681-+100	
0.82		22	30	140	2.5	160	B82422-A3821-+100	

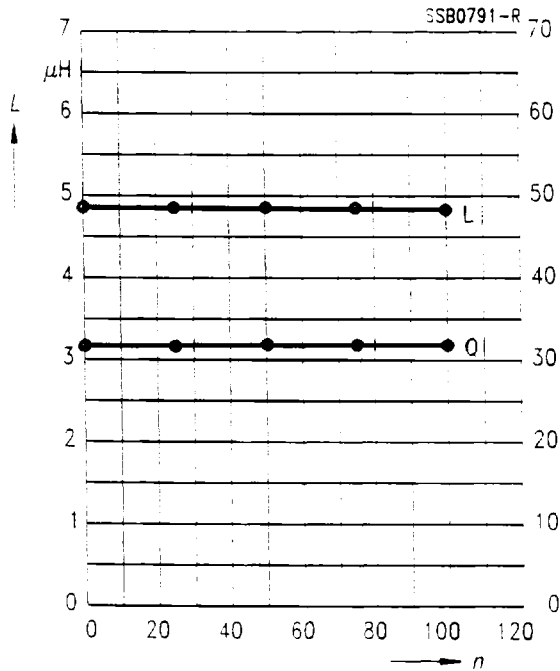
continued on page 4

1) Replace the + in the ordering code by the code letter for tolerance K =  $\pm 10\%$  or M =  $\pm 20\%$ .  
Closer tolerances upon request.

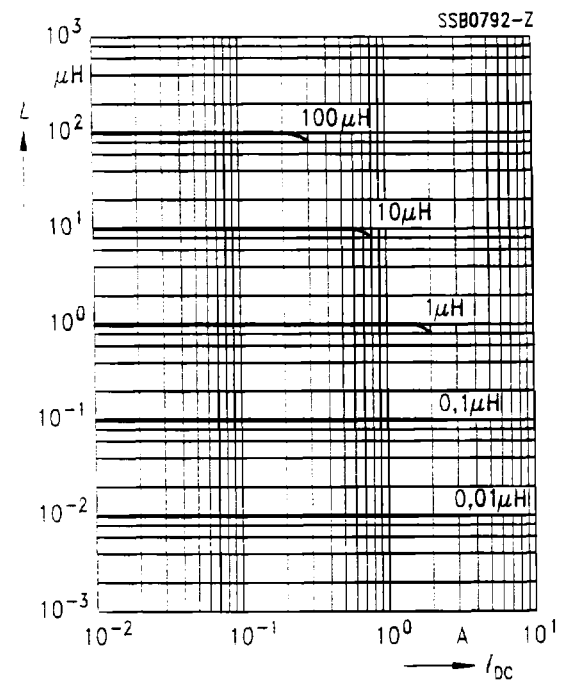
Inductance $L$ $\mu\text{H}$	Tolerance	Q at meas. frequency		Rated current	DC resistance	Resonance frequency	Ordering code <sup>1)</sup>	Core material
		$Q_{\min}$	MHz	$I_N$ mA	$R_{\max}$ $\Omega$	$f_{\min}$ MHz		
1.0		20	7.96	380	0.34	320	B82422-A1102-+100	Ferrite
1.2		20	7.96	370	0.37	300	B82422-A1122-+100	
1.5		20	7.96	340	0.42	270	B82422-A1152-+100	
1.8		25	7.96	290	0.60	250	B82422-A1182-+100	
2.2		25	7.96	270	0.75	125	B82422-A1222-+100	
2.7		25	7.96	240	0.88	110	B82422-A1272-+100	
3.3		27	7.96	200	1.20	75	B82422-A1332-+100	
3.9		27	7.96	190	1.40	70	B82422-A1392-+100	
4.7		27	7.96	150	2.20	65	B82422-A1472-+100	
5.6	$\pm 10\%$	27	7.96	140	2.60	60	B82422-A1562-+100	
6.8	or	27	7.96	135	2.80	55	B82422-A1682-+100	
8.2	$\pm 20\%$	27	7.96	130	3.00	50	B82422-A1822-+100	
10		27	2.52	180	1.60	25	B82422-A1103-+100	
12		27	2.52	175	1.65	23	B82422-A1123-+100	
15		27	2.52	165	1.85	20	B82422-A1153-+100	
18		27	2.52	155	2.00	17	B82422-A1183-+100	
22		27	2.52	140	2.65	16	B82422-A1223-+100	
27		27	2.52	120	3.70	15	B82422-A1273-+100	
33		27	2.52	105	4.50	13	B82422-A1333-+100	
39		27	2.52	90	6.30	12	B82422-A1393-+100	
47		27	2.52	85	7.00	11	B82422-A1473-+100	
56		27	2.52	85	6.75	9	B82422-A1563-+100	
68		27	2.52	80	7.70	9	B82422-A1683-+100	
82		27	2.52	70	10.0	8	B82422-A1823-+100	
100		27	2.52	65	11.5	7	B82422-A1104-+100	

1) Replace the + in the ordering code by the code letter for tolerance K =  $\pm 10\%$  or M =  $\pm 20\%$ .  
Closer tolerances upon request.

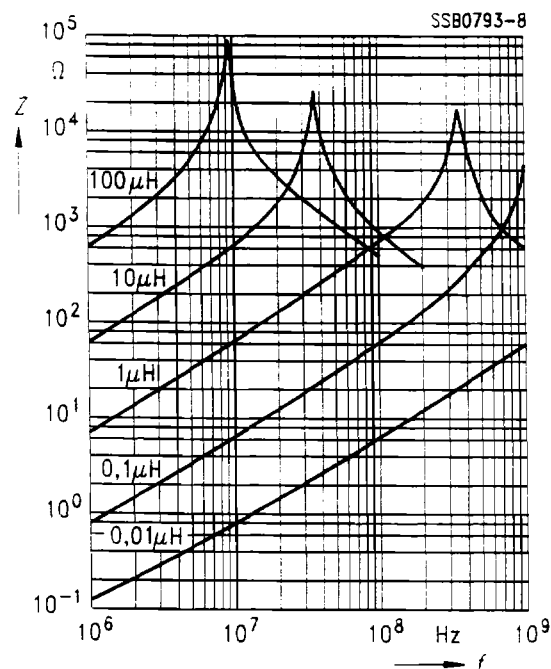
**Inductance  $L$  and quality  $Q$**   
 versus number  $n$  of dip soldering  
 processes (240 °C, 5 s)



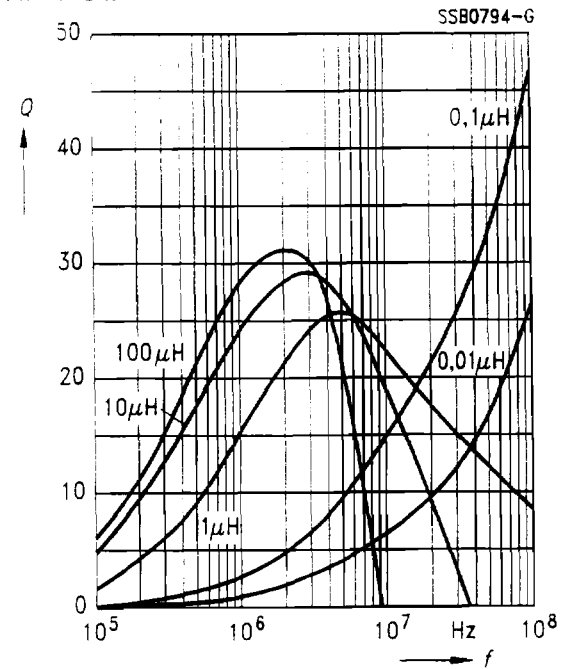
**Inductance  $L$**   
 versus dc load  $I_{DC}$ ;  
 measured with LCR meter HP 4275A



**Impedance  $Z$**   
 versus frequency  $f$ ;  
 measured with HF impedance analyzer  
 HP 4191A

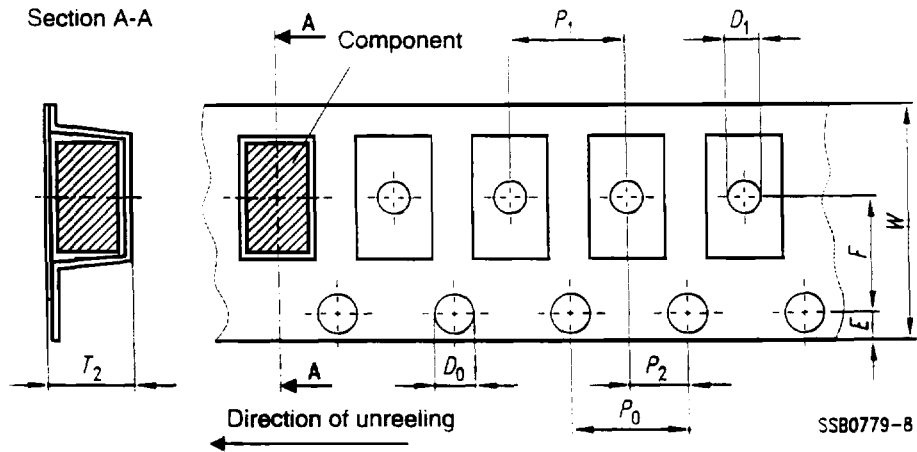


**Quality  $Q$**   
 versus frequency  $f$ ;  
 measured with impedance analyzer  
 HP 4194A



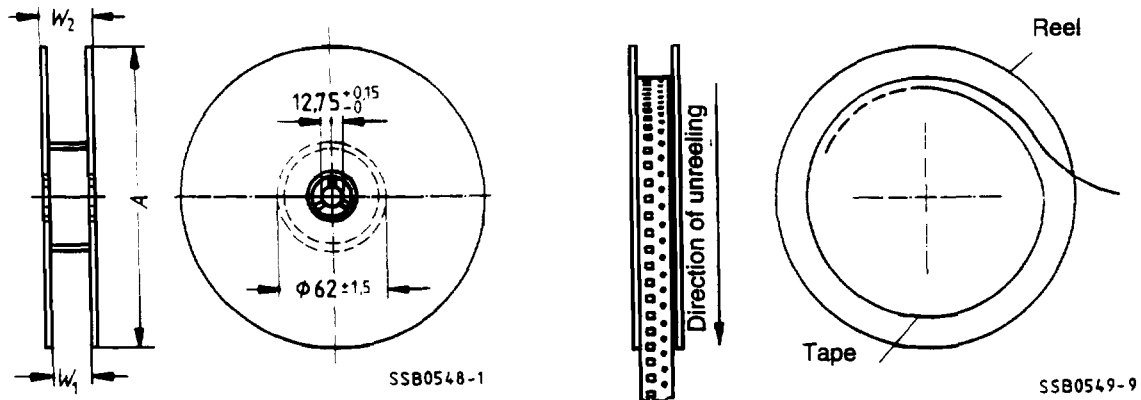
**Tape packaging and packing**

The chokes are supplied taped and reeled. Taping is in accordance with IEC 286-3.



**Tape dimensions (mm)**

$W$	$D_0$	$D_1$	$P_0$	$P_1$	$P_2$	$E$	$F$	$T_2$
$8 \pm 0.3$	$1.5 \pm 0.1$	$1.0 \pm 0.2$	$4 \pm 0.1$	$4 \pm 0.1$	$2 \pm 0.05$	$1.75 \pm 0.1$	$3.5 \pm 0.5$	$\leq 2.6$



Marking on reel: inductance and tolerance in clear text plus ordering code.

**Reel dimensions (mm)**

$A$	$W_1$	$W_2$
$180 \begin{smallmatrix} +0 \\ -2 \end{smallmatrix}$	$8.4 \begin{smallmatrix} +1.5 \\ -0 \end{smallmatrix}$	14.4 max.

**Packing unit:** 2000 pieces per reel

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