



Siemens Matsushita Components

EMC

Components

RF Chokes 

High Current

B82442-H

Data Book Supplement

SIMID 05 (Siemens-Miniature-Inductors)

Rated inductance 1 to 10000 μ H

Rated current 0,035 to 2,5 A



Construction

- Size as EIA standard: 2220
- Upright ferrite drum core
- Laser welded, encapsulation flame retardant
- Temperature index of copper wire enamel: 180°C

Features

- Very high rated current
- High L values
- Suitable for reflow (IR and vapor phase) and wave soldering

Applications

- Filtering of supply voltages, coupling, decoupling
- DC/DC converters
- Automotive electronics
- Telecommunication

Terminals

- Tinned
- Base material CuSn6; 0,4 μ m Cu; 1–2 μ m Ag; 5–7 μ m Sn
- No leaching during wave soldering

Marking

Marking on component:

Manufacturer, date code,
 L value and tolerance of L value (coded)

Minimum marking on reel:

Manufacturer, part number, ordering code,
 L value and tolerance of L value, quantity, date of packing

Delivery mode

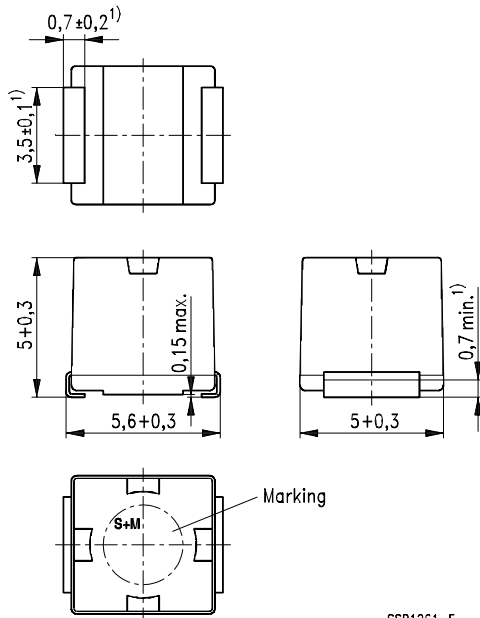
Blister tape 12 mm, reel packing dia. 330 mm.

For details on taping, packing and packing units refer to data book

"EMC Components", page 433.

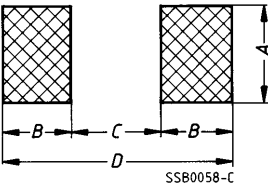
Dimensional drawing

Size as per EIA standard: 2220
Approx. weight 400 mg



SSB1261-E

PCB layout recommendation



Dimensions (mm)	A	B	C	D
Wave/reflow soldering	4,5	2,0	4,0	8,0

1) Soldering area, tinned



Technical data and ordering codes

For further technical data see page 7.

L_R μH	Tolerance	$Q_{\min}$	f_L, f_Q MHz	I_R A	$R_{\max}$ Ω	$f_{\text{res, min}}$ MHz	Ordering code ¹⁾
1,0	$\pm 10 \%$ $\cong K$	10	7,96	2,50	0,024	95	B82442-H1102-K
1,2		10	7,96	2,35	0,028	70	B82442-H1122-K
1,5		10	7,96	2,20	0,032	55	B82442-H1152-K
1,8		10	7,96	2,00	0,040	47	B82442-H1182-K
2,2		10	7,96	1,80	0,048	42	B82442-H1222-K
2,7		10	7,96	1,70	0,056	37	B82442-H1272-K
3,3		10	7,96	1,55	0,064	34	B82442-H1332-K
3,9		10	7,96	1,45	0,072	32	B82442-H1392-K
4,7		10	7,96	1,35	0,088	29	B82442-H1472-K
5,6	$\pm 10 \%$ $\cong K$	10	7,96	1,25	0,104	26	B82442-H1562-K
6,8		10	7,96	1,13	0,120	24	B82442-H1682-K
8,2		10	7,96	1,05	0,144	22	B82442-H1822-K
10		10	2,52	1,00	0,168	19	B82442-H1103-K
12		10	2,52	0,88	0,20	17	B82442-H1123-K
15		10	2,52	0,81	0,24	16	B82442-H1153-K
18		10	2,52	0,74	0,29	14	B82442-H1183-K
22		10	2,52	0,67	0,35	13	B82442-H1223-K
27		10	2,52	0,62	0,42	11,5	B82442-H1273-K
33	$\pm 5 \%$ $\cong J$	10	2,52	0,56	0,50	10,5	B82442-H1333-+
39		10	2,52	0,52	0,58	9,5	B82442-H1393-+
47		10	2,52	0,48	0,68	8,5	B82442-H1473-+
56	$\pm 10 \%$ $\cong K$	10	2,52	0,43	0,80	7,8	B82442-H1563-+
68		10	2,52	0,40	0,96	7,0	B82442-H1683-+
82		10	2,52	0,38	1,12	6,4	B82442-H1823-+

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



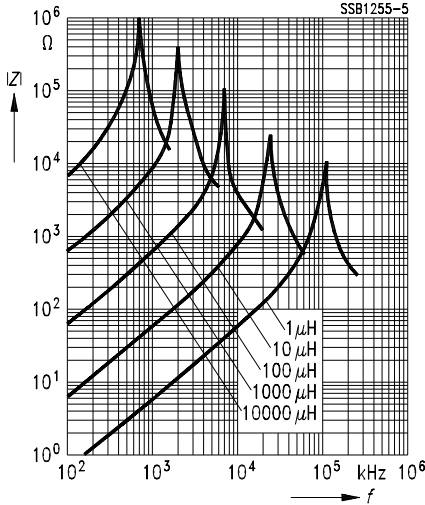
Technical data and ordering codes

For further technical data see page 7.

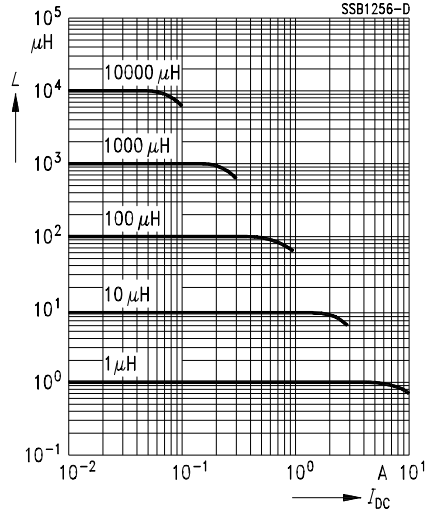
L_R μH	Tolerance	$Q_{\min}$	f_L, f_Q MHz	I_R A	$R_{\max}$ Ω	$f_{\text{res, min}}$ MHz	Ordering code ¹⁾
100	$\pm 5 \%$ $\triangleq \text{J}$	20	0,796	0,35	1,28	6,0	B82442-H1104-+
120		20	0,796	0,32	1,52	5,4	B82442-H1124-+
150		20	0,796	0,29	1,76	4,8	B82442-H1154-+
180	$\pm 10 \%$ $\triangleq \text{K}$	20	0,796	0,27	2,24	4,4	B82442-H1184-+
220		20	0,796	0,24	2,72	3,9	B82442-H1224-+
270		20	0,796	0,22	3,36	3,6	B82442-H1274-+
330		20	0,796	0,20	3,92	3,2	B82442-H1334-+
390		20	0,796	0,18	4,64	2,9	B82442-H1394-+
470		20	0,796	0,17	5,60	2,6	B82442-H1474-+
560		20	0,796	0,15	6,80	2,4	B82442-H1564-+
680		20	0,796	0,14	8,00	2,2	B82442-H1684-+
820		20	0,796	0,13	10,4	2,0	B82442-H1824-+
1000		30	0,252	0,120	12,0	1,8	B82442-H1105-+
1200		30	0,252	0,105	13,6	1,5	B82442-H1125-+
1500		30	0,252	0,100	16,0	1,4	B82442-H1155-+
1800		30	0,252	0,085	24,0	1,3	B82442-H1185-+
2200		30	0,252	0,075	28,0	1,2	B82442-H1225-+
2700		30	0,252	0,065	44,0	1,1	B82442-H1275-+
3300		30	0,252	0,055	48,0	1,0	B82442-H1335-+
3900		30	0,252	0,053	56,0	1,0	B82442-H1395-+
4700		30	0,252	0,050	62,4	0,9	B82442-H1475-+
5600		30	0,252	0,046	68,0	0,8	B82442-H1565-+
6800		30	0,252	0,042	88,0	0,7	B82442-H1685-+
8200		30	0,252	0,039	100	0,6	B82442-H1825-+
10000		30	0,0796	0,035	120	0,5	B82442-H1106-+

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

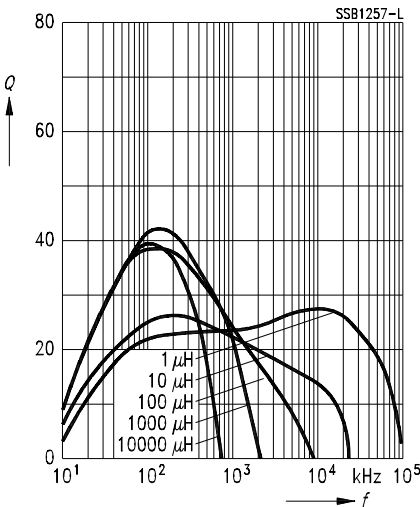
Impedance $|Z|$
versus frequency f
measured with impedance analyzer
HP 4194A/HP 4191A



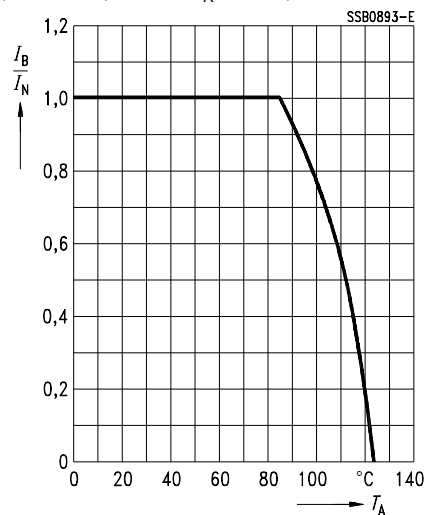
Inductance L
versus dc load I_{DC}
measured with LCR meter
HP 4275A



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



Current derating I_{op}/I_R
versus ambient
temperature T_A
(Rated temperature $T_R = 85^\circ\text{C}$)





General technical data

Rated inductance L_R	Measured at frequency f_L , with impedance analyzer HP 4194A
Q factor $Q_{\min}$	Measured at frequency f_Q , with impedance analyzer HP 4194A
Rated current I_N	Maximum permissible dc with an inductance decrease of $\Delta L/L_0 \leq 10\%$ and/or temperature increase of $\leq 40\text{ K}$ at rated temperature $T_R = 85^\circ\text{C}$ (see derating curves)
Self resonance frequency $f_{\text{res, min}}$	Measured with network analyzer HP 8753D
DC resistance $R_{\max}$	Measured at 20°C ambient temperature, Measuring current $< I_R$
Climatic category	In accordance with IEC 68-1 55/125/56 ($-55^\circ\text{C}/+125^\circ\text{C}/56$ days damp heat test)
Solderability	$(215 \pm 3)^\circ\text{C}$, $(3 \pm 0,3)\text{ s}$ Wetting of soldering area: $\geq 90\%$
Resistance to soldering heat	In accordance with IEC 68-2-20, test Tb 260°C , 10 s
Permissible PCB bending	2 mm (100 mm long standard PCB)

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