SMD

Size 1210 (EIA) or 3225 (IEC)
Rated inductance 0,010 to 330 µH
Rated current 40 to 450 mA

Construction

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

Features

- High *Q* factor
- High resonance frequency
- High *L* value
- 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 µm Cu; 1–2 µm Ag; 5–7 µm Sn
- Base material CuSn6
- Suitable for soldering and conductive adhesion
- No leaching during wave soldering

Marking

Marking on component:
Manufacturer and letter »T«,
L value (in µH) 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 ∅ reel
For details on taping, packing and packing units see page 153

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 ≤ 30 K at rated temperature of 85 °C
Self-resonance frequency $f_{res, min}$	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 °C/+ 125 °C/56 days damp heat test)
Solderability	In accordance with IEC 60062-2-58 (215 ± 3) °C, (3 ± 0,3) s Wetting of soldering area: ≥ 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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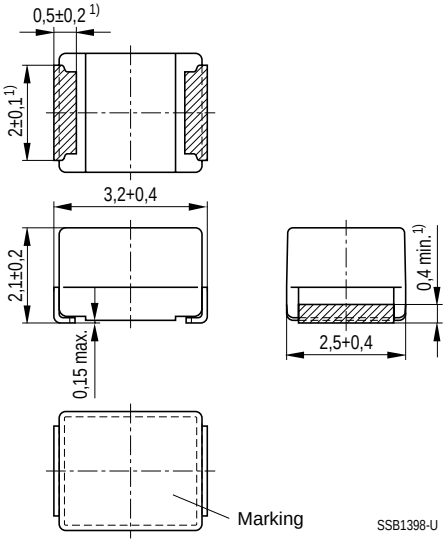
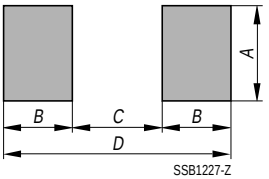
Dimensional drawing



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

1) Soldering area, tinned

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Characteristics and ordering codes

L_R µH	Tolerance[1]	Q_{min}	f_L; f_Q MHz	I_R mA	R_{max} Ω	$f_{res,\ min}$ MHz	Ordering code[2] (∅ 180-mm reel)
Core material: ceramics							
0,010	± 5 % ≙ J	15	100	450	0,10	4000	B82422-T3100-+
0,012		17	100	450	0,11	3500	B82422-T3120-+
0,015	± 10 % ≙ K	19	100	450	0,13	3000	B82422-T3150-+
0,018		21	100	450	0,14	2000	B82422-T3180-+
0,022		23	100	450	0,16	2000	B82422-T3220-+
0,027		23	100	450	0,17	1700	B82422-T3270-+
0,033		25	100	450	0,18	1700	B82422-T3330-+
0,039		25	100	450	0,19	1300	B82422-T3390-+
0,047		26	100	450	0,20	1300	B82422-T3470-+
0,056		26	100	450	0,21	1100	B82422-T3560-+
0,068		27	100	450	0,23	1000	B82422-T3680-+
0,082		27	100	450	0,26	1000	B82422-T3820-+
0,10		28	100	450	0,31	900	B82422-T3101-+
Core material: ferrite							
0,12	± 5 % ≙ J	30	25,2	450	0,15	900	B82422-T1121-+
0,15		30	25,2	450	0,18	700	B82422-T1151-+
0,18	± 10 % ≙ K	30	25,2	450	0,19	500	B82422-T1181-+
0,22		30	25,2	450	0,20	500	B82422-T1221-+
0,27		30	25,2	450	0,21	500	B82422-T1271-+
0,33		30	25,2	450	0,23	500	B82422-T1331-+
0,39		30	25,2	450	0,25	400	B82422-T1391-+
0,47		30	25,2	450	0,30	400	B82422-T1471-+
0,56		30	25,2	450	0,31	300	B82422-T1561-+
0,68		30	25,2	450	0,34	300	B82422-T1681-+
0,82		30	25,2	450	0,38	300	B82422-T1821-+
1,0		30	7,96	400	0,6	300	B82422-T1102-+
1,2		30	7,96	390	0,7	250	B82422-T1122-+
1,5		30	7,96	370	0,7	200	B82422-T1152-+
1,8		30	7,96	350	0,8	140	B82422-T1182-+
2,2		30	7,96	320	0,8	100	B82422-T1222-+

1) Closer tolerances and special versions upon request.
2) Replace the + by the code letter for the required inductance tolerance.
For reel size ∅ 330 mm append code number »8«. Example: B82422-T3100-K8

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Characteristics and ordering codes (continued)

L_R µH	Tolerance[1]	Q_{min}	f_L; f_Q MHz	I_R mA	R_{max} Ω	$f_{res,\ min}$ MHz	Ordering code[2] (∅ 180-mm reel)
Core material: ferrite							
2,7	± 5 %	30	7,96	290	0,9	70	B82422-T1272-+
3,3	≙	30	7,96	260	1,2	60	B82422-T1332-+
3,9	± 10 %	30	7,96	250	1,3	60	B82422-T1392-+
4,7	≙ K	30	7,96	220	1,5	50	B82422-T1472-+
5,6		27	7,96	200	1,6	45	B82422-T1562-+
6,8		27	7,96	180	1,8	40	B82422-T1682-+
8,2		27	7,96	170	2,0	35	B82422-T1822-+
10		27	2,52	150	2,1	30	B82422-T1103-+
12		27	2,52	140	2,5	25	B82422-T1123-+
15		27	2,52	130	2,8	20	B82422-T1153-+
18		27	2,52	120	3,0	20	B82422-T1183-+
22		27	2,52	110	3,5	20	B82422-T1223-+
27		27	2,52	80	4,5	20	B82422-T1273-+
33		27	2,52	70	5,6	17	B82422-T1333-+
39		27	2,52	65	6,4	16	B82422-T1393-+
47		27	2,52	60	7,0	15	B82422-T1473-+
56		27	2,52	60	8,0	12	B82422-T1563-+
68		27	2,52	60	9,0	9	B82422-T1683-+
82		25	2,52	60	10	9	B82422-T1823-+
100		20	0,796	60	11	8	B82422-T1104-+
120		20	0,796	60	12	8	B82422-T1124-+
150		20	0,796	50	17	7	B82422-T1154-+
180		20	0,796	50	18	7	B82422-T1184-+
220		20	0,796	45	22	6	B82422-T1224-+
270		20	0,796	40	28	5	B82422-T1274-+
330		20	0,796	40	34	4	B82422-T1334-+

1) Closer tolerances and special versions upon request.
2) Replace the + by the code letter for the required inductance tolerance.
For reel size ∅ 330 mm append code number »8«. Example: B82422-T1272-K8

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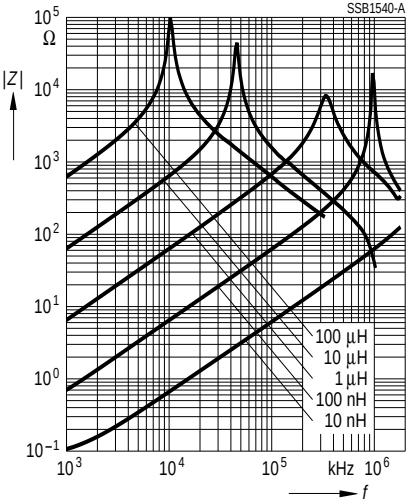
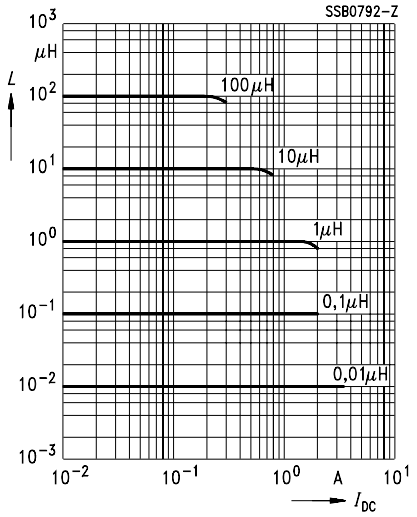
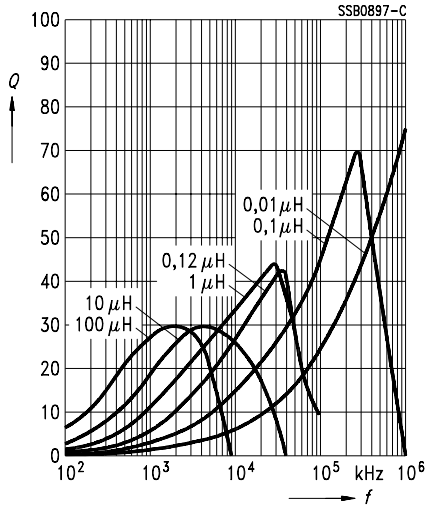
Impedance $|Z|$
versus frequency f
measured with impedance analyzer
HP 4291A



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