



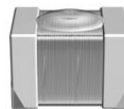
SMT Inductors, SIMID Series

B82498-B

SIMID 0805-B

SMD

Size 0805 (EIA) and/or 2012 (IEC)
Rated inductance 2,7 to 4700 nH
Rated current 90 to 1000 mA



Construction

- Cubic coil with ceramic or ferrite core
- Winding partially plastic-sealed
- Winding ends welded to contact areas

Features

- High Q factor
- High resonance frequency
- Close inductance tolerance
- Suitable for reflow (IR and vapor phase) and wave soldering

Applications

Resonant circuits, impedance matching for

- Antenna amplifiers
- DECT systems
- Mobile phones
- Keyless entry
- GPS (Global Positioning System)

Terminals

- Thick-film coating of Ag/Pd/Pt
- Base material Al₂O₃ ceramic or ferrite

Marking

No marking on component

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 178-mm or 330-mm Ø reel

For details on taping, packing and packing units [see page 153](#)



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General technical data

Rated inductance L_R	Measured with RF LCR meter HP 4286A at frequency f_L
Q factor Q_{min} , Q_{typ}	Measured with RF LCR meter HP 4286A, Q_{min} measured at frequency f_Q
Rated current I_R	Maximum permissible dc with inductance decrease $\Delta L/L_0 \leq 10\%$ and temperature increase of $\leq 20\text{ K}$ 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 ($-55^\circ\text{C}/+125^\circ\text{C}/56$ days damp heat test)
Solderability	In accordance with IEC 60062-2-58 ($215 \pm 3^\circ\text{C}$, $(3 \pm 0,3)$ s) Wetting of soldering area: $\geq 95\%$
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. 8,5 mg



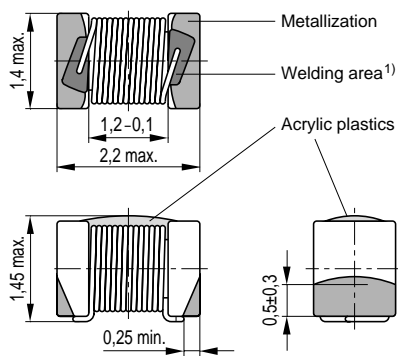
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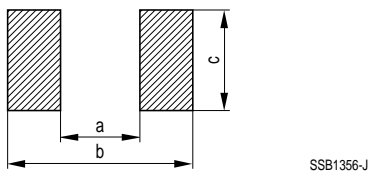
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Dimensional drawing



Layout recommendation



Dimensions (mm)

<i>a</i>	<i>b</i>	<i>c</i>
1,1 ± 0,1	3,4 ± 0,4	1,1 ± 0,2

1) This area (30 % of contact area) should not be used to asses solderability



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Characteristics and ordering codes

L_R nH	Tolerance ¹⁾	Q_{min}	Q_{typ} (at 800 MHz)	$f_L; f_Q$ MHz	I_R mA	R_{max} Ω	$f_{res, min}$ MHz	Ordering code ²⁾ (\varnothing 180-mm reel)
Core material: ceramics								
2,7	$\pm 10\%$	20	50	250	1000	0,03	6000	B82498-B3279-M
5,6	$\triangle K$	25	60	250	900	0,04	6000	B82498-B3569-M
6,8	$\pm 20\%$	30	70	250	800	0,05	5500	B82498-B3689-K
8,2	$\triangle M$	35	75	250	700	0,06	5000	B82498-B3829-M
10	$\pm 5\%$	40	80	250	700	0,06	4500	B82498-B3100-+
12	$\triangle J$	40	85	250	700	0,06	4000	B82498-B3120-+
15	$\pm 10\%$	40	85	250	670	0,07	3500	B82498-B3150-+
18	$\triangle K$	45	90	250	670	0,07	3300	B82498-B3180-+
22		45	85	250	600	0,09	2600	B82498-B3220-+
27		50	90	250	600	0,09	2500	B82498-B3270-+
33		45	80	250	520	0,12	2150	B82498-B3330-+
39		50	90	250	560	0,10	2050	B82498-B3390-+
47		45	85	200	500	0,13	1900	B82498-B3470-+
56	$\pm 2\%$	45	60	200	480	0,14	1700	B82498-B3560-+
68	$\triangle G$	45	60	200	410	0,19	1550	B82498-B3680-+
82	$\pm 5\%$	40	60	150	390	0,21	1430	B82498-B3820-+
100	$\triangle J$	40	50	150	350	0,26	1310	B82498-B3101-+
120	$\pm 10\%$	40	45	150	270	0,44	1210	B82498-B3121-+
150	$\triangle K$	35	40	100	270	0,44	1120	B82498-B3151-+
180		35	30	100	260	0,47	1030	B82498-B3181-+
220		35	—	100	240	0,55	950	B82498-B3221-+
270		35	—	100	180	1,0	870	B82498-B3271-+
330		35	—	100	180	1,0	800	B82498-B3331-+
390		35	—	100	130	1,9	730	B82498-B3391-+
470		35	—	100	115	2,4	660	B82498-B3471-+
560		35	—	100	100	3,2	600	B82498-B3561-+

1) Closer tolerances upon request.

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

For reel size \varnothing 330 mm append code number »8«. Example: B82498-B3279-M8



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SIMID 0805-B



Characteristics and ordering codes (continued)

L_R nH	Tolerance ¹⁾	Q_{\min}	Q_{typ} (at 800 MHz)	$f_L; f_Q$ MHz	I_R mA	R_{\max} Ω	$f_{\text{res, min}}$ MHz	Ordering code ²⁾ (\varnothing 180-mm reel)
Core material: ferrite								
680	$\pm 2\%$	20	—	25,2	250	0,50	450	B82498-B1681-+
820	$\triangleq G$	20	—	25,2	240	0,55	400	B82498-B1821-+
1000	$\pm 5\%$	20	—	7,96	250	0,50	350	B82498-B1102-+
1200	$\triangleq J$	20	—	7,96	220	0,65	300	B82498-B1122-+
1500	$\pm 10\%$	20	—	7,96	200	0,75	250	B82498-B1152-+
1800	$\triangleq K$	20	—	7,96	190	0,85	250	B82498-B1182-+
2200		20	—	7,96	130	1,7	200	B82498-B1222-+
2700		20	—	7,96	120	2,0	200	B82498-B1272-+
3300		20	—	7,96	100	3,3	200	B82498-B1332-+
3900		20	—	7,96	95	3,6	150	B82498-B1392-+
4700		20	—	7,96	90	3,8	150	B82498-B1472-+

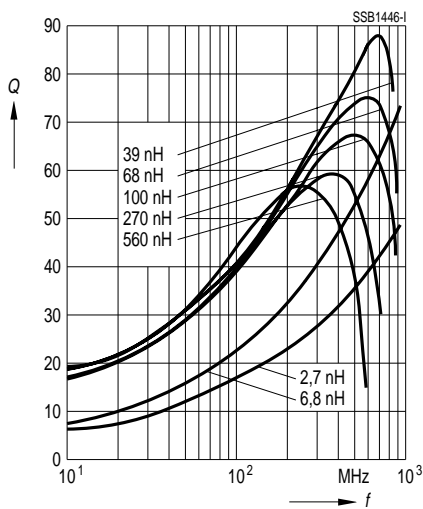
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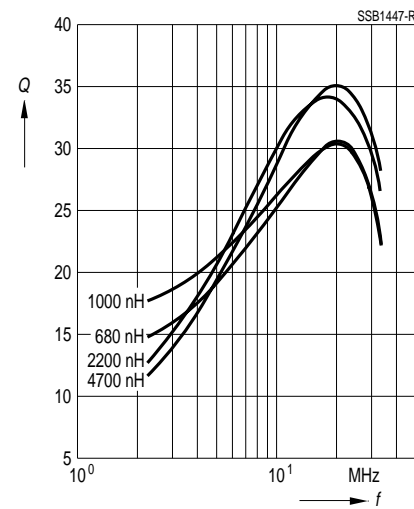
For reel size \varnothing 330 mm append code number »8«. Example: B82498-B1681-K8



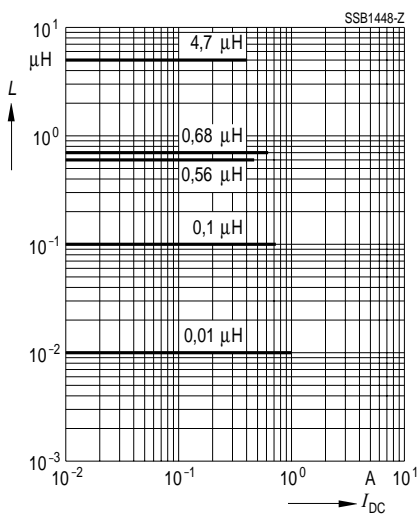
Q factor (ceramic core)
versus frequency f
measured with RF LCR meter
HP 4286A



Q factor (ferrite core)
versus frequency f
measured with RF LCR meter
HP 4286A



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



Current derating I_{op}/I_R
versus ambient temperature T_A

