



SMT inductors

SIMID series, SIMID 1008-A

Series/Type: **B82494A**
Date: March 2008

SMD

Size 1008 (EIA) or 2520 (IEC)

Rated inductance 0.010 μH to 100 μH

Rated current 60 mA to 280 mA



Construction

- Ferrite core
- Molded epoxy encapsulation

Features

- High Q factor
- High resonance frequency
- Suitable for reflow soldering
- Non-automotive
- RoHS-compatible

Applications

- Filtering of supply voltages, coupling, decoupling
- Antenna systems
- Telecommunications

Terminals

- Base material phosphor bronze
- Layer composition SnCu (lead-free)
- Electro-plated

Marking

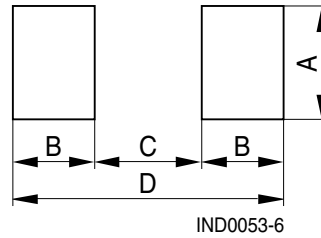
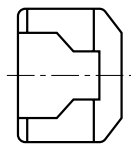
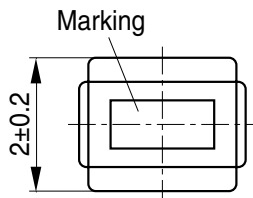
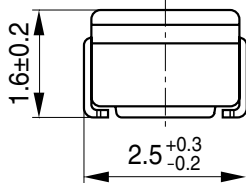
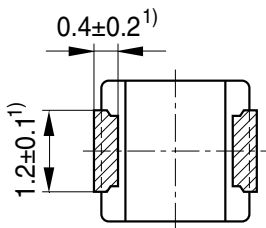
- Marking on component:
L value (in μH)
- Minimum data on reel:
Manufacturer, ordering code, L value,
quantity, date of packing

Delivery mode and packing unit

- 8-mm blister tape, wound on 180-mm $\varnothing$ reel
- Packing unit: 2000 pcs./reel

SMD

Dimensional drawing and layout recommendation



IND0053-6

A	B	C	D
1.6	1.05	1.5	3.5

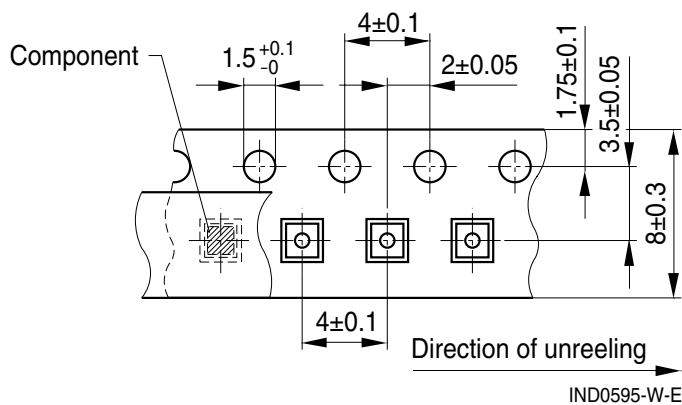
1) Soldering area

IND0543-T-E

Dimensions in mm

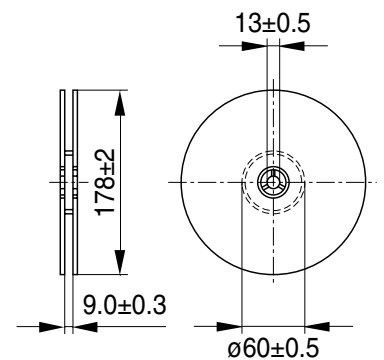
Taping and packing

Blister tape



IND0595-W-E

Reel



IND0591-M

Dimensions in mm

Technical data and measuring conditions

Rated inductance L_R	Measured with impedance analyzer Agilent 4191A at frequency f_L , 0.1 V, 20 °C
Q factor Q_{min}	Measured with impedance analyzer Agilent 4191A at frequency f_Q , 20 °C
Rated temperature T_R	85 °C
Rated current I_R	Maximum permissible DC with inductance decrease $\Delta L/L_0 \leq 10\%$ and temperature increase of ≤ 20 K at rated temperature
Self-resonance frequency $f_{res,min}$	Measured with network analyzer Agilent 8753D, 20 °C
DC resistance R_{max}	Measured at 20 °C
Solderability (lead-free)	Sn95.5Ag3.8Cu0.7: (245 $\pm$ 5) °C, (5 $\pm$ 0.3) s Wetting of soldering area $\geq 90\%$ (based on IEC 60068-2-58)
Resistance to soldering heat	260 °C, 10 s (based on IEC 60068-2-58)
Climatic category	55/085/56 (to IEC 60068-1)
Storage conditions	Mounted: -55 °C ... +85 °C Packaged: -25 °C ... +40 °C, $\leq 75\%$ RH
Weight	Approx. 21 mg

Characteristics and ordering codes

L_R μH	Tolerance	Q_{min}	$f_L; f_Q$ MHz	I_R mA	R_{max} Ω	$f_{res,min}$ MHz	Ordering code
0.010	$\pm 10\% \triangleq K$	10	100	280	0.32	2500	B82494A1100K000
0.012		10	100	270	0.34	2200	B82494A1120K000
0.015		10	100	255	0.38	1800	B82494A1150K000
0.018		10	100	250	0.40	1550	B82494A1180K000
0.022		15	100	240	0.43	1350	B82494A1220K000
0.027		15	100	230	0.47	1150	B82494A1270K000
0.033		15	100	220	0.51	1000	B82494A1330K000
0.039		15	100	215	0.55	890	B82494A1390K000
0.047		15	100	205	0.59	770	B82494A1470K000
0.056		15	100	200	0.63	670	B82494A1560K000
0.068		15	100	190	0.68	590	B82494A1680K000
0.082		15	100	185	0.73	520	B82494A1820K000
0.10		10	25.2	175	0.80	460	B82494A1101K000
0.12		10	25.2	170	0.87	400	B82494A1121K000
0.15		10	25.2	160	0.98	340	B82494A1151K000

Characteristics and ordering codes

L _R μH	Tolerance	Q _{min}	f _L ; f _Q MHz	I _R mA	R _{max} Ω	f _{res,min} MHz	Ordering code
0.18	±10% △ K	10	25.2	155	1.05	300	B82494A1181K000
0.22		25	25.2	190	0.70	230	B82494A1221K000
0.27		25	25.2	180	0.75	210	B82494A1271K000
0.33		25	25.2	170	0.85	190	B82494A1331K000
0.39		25	25.2	160	0.95	175	B82494A1391K000
0.47		25	25.2	155	1.00	160	B82494A1471K000
0.56		25	25.2	150	1.10	150	B82494A1561K000
0.68		25	25.2	140	1.25	135	B82494A1681K000
0.82		25	25.2	130	1.40	125	B82494A1821K000
1.0		25	7.96	195	0.65	115	B82494A1102K000
1.2		25	7.96	180	0.75	100	B82494A1122K000
1.5		25	7.96	170	0.85	90	B82494A1152K000
1.8		25	7.96	160	0.95	85	B82494A1182K000
2.2		25	7.96	155	1.05	80	B82494A1222K000
2.7		25	7.96	145	1.20	75	B82494A1272K000
3.3		25	7.96	135	1.30	65	B82494A1332K000
3.9		25	7.96	130	1.40	60	B82494A1392K000
4.7		25	7.96	125	1.55	55	B82494A1472K000
5.6		25	7.96	120	1.75	50	B82494A1562K000
6.8		25	7.96	115	1.95	45	B82494A1682K000
8.2		25	7.96	105	2.2	40	B82494A1822K000
10		25	2.52	80	3.5	32	B82494A1103K000
12		25	2.52	75	3.8	30	B82494A1123K000
15		25	2.52	70	4.4	28	B82494A1153K000
18		25	2.52	65	5.0	25	B82494A1183K000
22		25	2.52	60	5.8	22	B82494A1223K000
27		20	2.52	115	6.3	21	B82494A1273K000
33		20	2.52	110	7.1	20	B82494A1333K000
39		20	2.52	90	9.5	18	B82494A1393K000
47		20	2.52	80	11.0	17	B82494A1473K000
56		20	2.52	75	12.1	16	B82494A1563K000
68		20	2.52	70	16.6	15	B82494A1683K000
82		20	2.52	65	19.0	13	B82494A1823K000
100		15	0.796	60	21.0	12	B82494A1104K000

Cautions and warnings

- Please note the recommendations in our Inductors data book (latest edition) and in the data sheets.
 - Particular attention should be paid to the derating curves given there.
 - The soldering conditions should also be observed. Temperatures quoted in relation to wave soldering refer to the pin, not the housing.
- If the components are to be washed varnished it is necessary to check whether the washing varnish agent that is used has a negative effect on the wire insulation, any plastics that are used, or on glued joints. In particular, it is possible for washing varnish agent residues to have a negative effect in the long-term on wire insulation.
- The following points must be observed if the components are potted in customer applications:
 - Many potting materials shrink as they harden. They therefore exert a pressure on the plastic housing or core. This pressure can have a deleterious effect on electrical properties, and in extreme cases can damage the core or plastic housing mechanically.
 - It is necessary to check whether the potting material used attacks or destroys the wire insulation, plastics or glue.
 - The effect of the potting material can change the high-frequency behaviour of the components.
- Ferrites are sensitive to direct impact. This can cause the core material to flake, or lead to breakage of the core.
- Even for customer-specific products, conclusive validation of the component in the circuit can only be carried out by the customer.

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