

**Size 0402 (EIA) and/or 1005 (IEC)****Rated inductance 1.0 to 100 nH****Rated current 90 to 400 mA****Construction**

- Copper-plated ceramic core
- Laser-cut winding, epoxy-coated

Features

- Extremely close tolerance of dimensions
- High resonance frequency
- Free of polarization effect
- Close inductance tolerance
- High mechanical stability
- Suitable for reflow (IR and vapor phase) and wave soldering

Applications

Resonant circuits, impedance matching for

- Mobile phones
- Keyless entry
- GPS (Global Positioning System)
- Video cameras

Terminals

- Electro-plated, 2 μm Ni, 5 μm Sn
- Base material Al_2O_3 ceramic with Cu layer

Marking

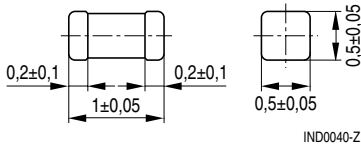
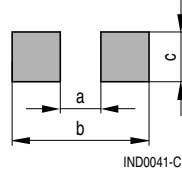
No marking on component

Minimum data on reel:

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

Delivery mode8-mm cardboard tape, wound on 178-mm $\varnothing$ reel

For details on taping, packing and packing units see data book, page 150.


Dimensional drawing

Layout recommendation

Dimensions (mm)

a	b	c
0.55 ± 0.05	1.6 ± 0.1	0.55 ± 0.05

Technical data and measuring conditions

Rated inductance L_R	Measured with impedance analyzer HP 4291A at frequency f_L
Q factor $Q_{\min}$, Q_{typ}	Measured with impedance analyzer HP 4291A, $Q_{\min}$ measured at frequency f_Q
Rated current I_R	Maximum permissible DC with a temperature increase of ≤ 15 K at rated temperature of 85 °C
Self-resonance frequency $f_{\text{res, min}}$	Measured with network analyzer HP 8720
DC resistance R_{max}	Measured at 20 °C ambient temperature, measuring current $< I_R$
Climatic category	In accordance with IEC 60068-1 40/085/56 (–40 °C/+85 °C/56 days damp heat test)
Solderability	(255 ± 5) °C, (3 ± 0.5) s Wetting of soldering area: ≥ 95 %
Resistance to soldering heat	In accordance with IEC 60068-2-20 260 °C, 10 s $\Delta L/L \leq \pm 5\%$; $\Delta Q/Q \leq \pm 20\%$
Permissible PCB bending	2 mm (100 mm long standard PCB)
Weight	Approx. 1 mg

Characteristics and ordering codes

L _R nH	Tolerance	Q _{min}	Q _{typ} (at 800 MHz)	f _L , f _Q MHz	I _R mA	R _{max} Ω	f _{res, min} MHz	Ordering code ¹⁾
1.0	± 0.3 nH △ A	8	21	100	400	0.05	6000	B82499A3109+000
1.2	± 0.2 nH △ Z	8	21	100	400	0.06	6000	B82499A3129+000
1.5		8	21	100	400	0.07	6000	B82499A3159+000
1.8		8	21	100	400	0.08	6000	B82499A3189+000
2.2		8	21	100	400	0.09	6000	B82499A3229+000
2.7		8	21	100	400	0.10	5500	B82499A3279+000
3.3		8	21	100	400	0.12	5500	B82499A3339+000
3.9		8	20	100	360	0.15	5200	B82499A3399+000
4.7		8	20	100	360	0.17	4800	B82499A3479+000
5.6		8	20	100	340	0.19	4600	B82499A3569+000
6.8	± 5% △ J	8	19	100	320	0.30	4000	B82499A3689+000
8.2	± 0.2 nH △ Z	8	19	100	320	0.35	3500	B82499A3829+000
10	± 5% △ J	8	19	100	320	0.41	2800	B82499A3100+000
12	± 2% △ G	8	19	100	320	0.45	2800	B82499A3120+000
15		8	19	100	240	0.60	2500	B82499A3150+000
18		8	19	100	240	0.70	2200	B82499A3180+000
22		8	19	100	200	0.80	2000	B82499A3220+000
27		8	19	100	200	1.2	1800	B82499A3270+000
33		8	18	100	170	1.4	1800	B82499A3330+000
39		8	18	100	150	1.7	1800	B82499A3390+000
47		8	17	100	140	2.1	1800	B82499A3470+000
56		8	17	100	130	2.5	1500	B82499A3560+000
68		8	15	100	120	4.0	1500	B82499A3680+000
82		8	15	100	110	4.5	1400	B82499A3820+000
100		8	14	100	90	5.5	1200	B82499A3101+000

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



Published by EPCOS AG

Corporate Communications, P.O. Box 80 17 09, 81617 Munich, GERMANY

☎ ++49 89 636 09, FAX (0 89) 636-2 26 89

© EPCOS AG 2005. Reproduction, publication and dissemination of this brochure and the information contained therein without EPCOS' prior express consent is prohibited.

Purchase orders are subject to the General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry recommended by the ZVEI (German Electrical and Electronic Manufacturers' Association), unless otherwise agreed.

This brochure replaces the previous edition.

For questions on technology, prices and delivery please contact the Sales Offices of EPCOS AG or the international Representatives.

Due to technical requirements components may contain dangerous substances. For information on the type in question please also contact one of our Sales Offices