



**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  $\mu\text{m}$  Ni, 5  $\mu\text{m}$  Sn
- Base material  $\text{Al}_2\text{O}_3$  ceramic with Cu layer

#### Marking

No marking on component

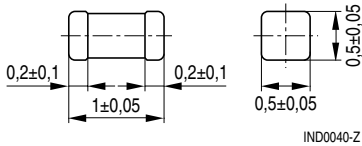
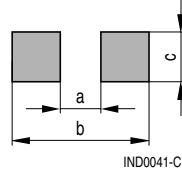
Minimum data on reel:

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

#### Delivery mode

8-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 $\leq 15$ K at rated temperature of 85°C
Self-resonance frequency $f_{res, min}$	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: $\geq 95$ %
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 <sub>R</sub> nH	Tolerance	Q <sub>min</sub>	Q <sub>typ</sub> (at 800 MHz)	f <sub>L</sub> ; f <sub>Q</sub> MHz	I <sub>R</sub> mA	R <sub>max</sub> Ω	f <sub>res, min</sub> MHz	Ordering code <sup>1)</sup>
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).

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