SMD

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

- Extremly 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

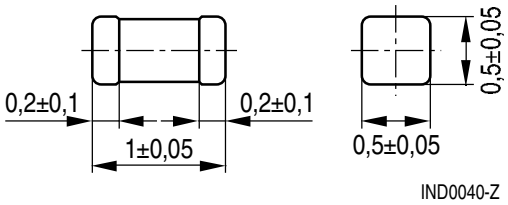
Minimum data on reel:
Manufacturer, part number, ordering code,
L value and tolerance of L value,
quantity, date of packing

Delivery mode

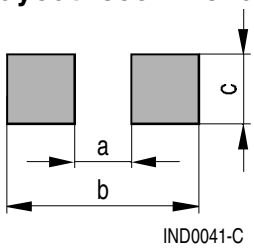
8-mm cardboard tape, wound on 178-mm ∅ reel
For details on taping, packing and packing units see data book, page 150.

SMD

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 $f_{res, min}$	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

SMD

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
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