

SMT power inductors

Size 10.4 × 10.4 × 4.8 (mm)

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B82464G4

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SMD

Rated inductance 0.82 ... 1000 µH

Rated current 0.34 ... 7.6 A

Construction

- Ferrite core
- Magnetically shielded
- Winding: enamel copper wire
- Winding welded to terminals

Features

- Temperature range up to +150 °C
- High rated current
- Low DC resistance
- Suitable for lead-free reflow soldering as referenced in JEDEC J-STD 020D
- Qualified to AEC-Q200
- RoHS-compatible

Applications

- Filtering of supply voltages
- Coupling, decoupling
- DC/DC converters
- Automotive electronics
- Industrial electronics

Terminals

- Base material CuFe2P
- Layer composition Ag, Sn (lead-free)
- Electro-plated

Marking

- Marking on component:
Manufacturer, L value (nH, coded),
L tolerance (coded), manufacturing date (YWWD),
two last digits of work order
- Minimum data on reel:
Manufacturer, ordering code,
L value, quantity, date of packing

Delivery mode and packing unit

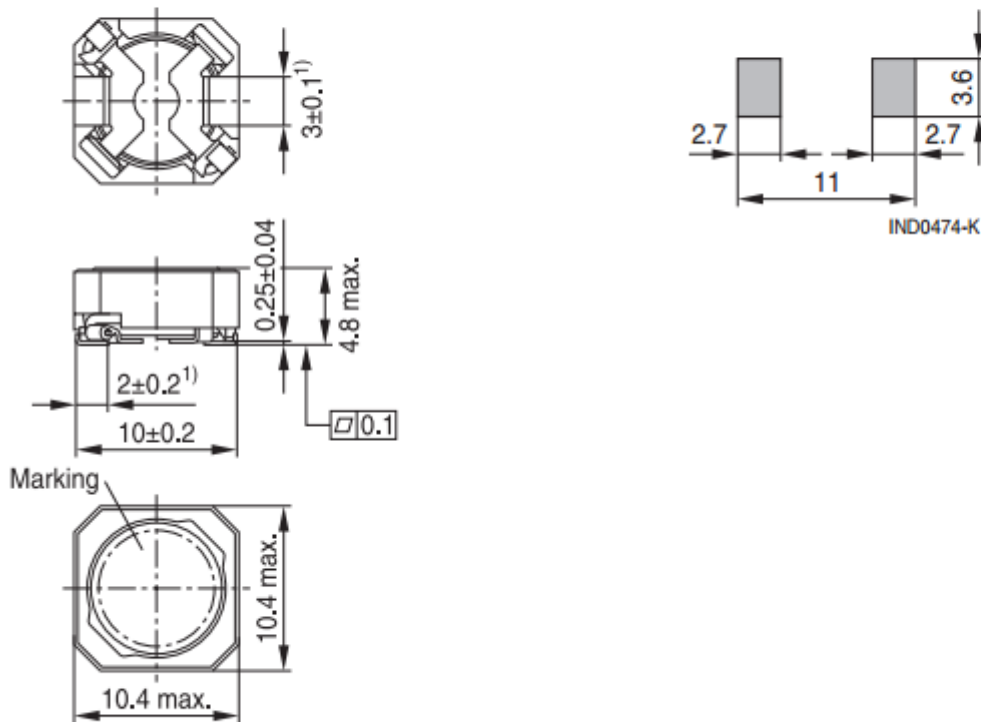
- 16-mm blister tape, wound on 330-mm Ø reel
- Packing unit: 750 pcs./reel



Size 10.4 x 10.4 x 4.8 (mm)

SMD

Dimensional drawing and layout recommendation



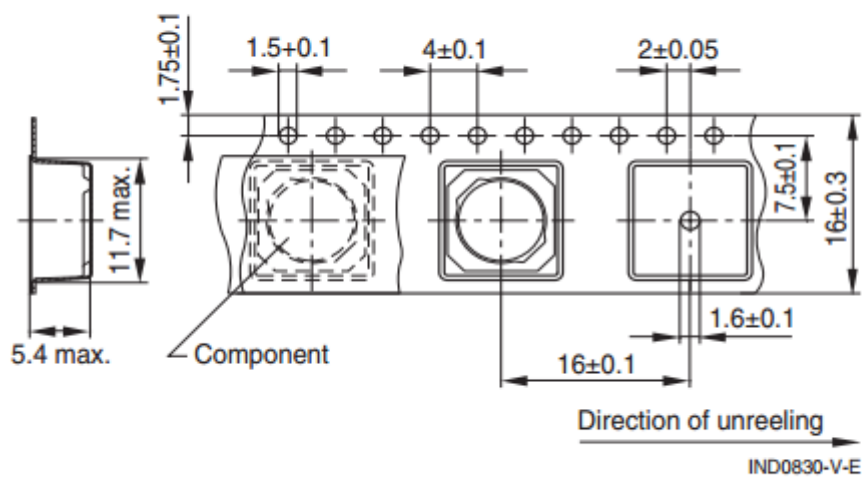
1) Soldering area

IND0477-H-E

Dimensions in mm

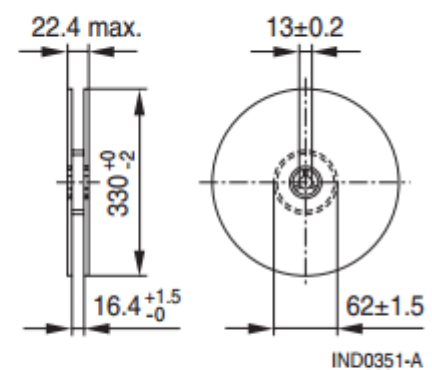
Taping and packing

Blister tape



Dimensions in mm

Reel



Technical data and measuring conditions

Rated inductance L_R	Measured with impedance analyzer Agilent 4294A at frequency f_L , 0.1 V, +20 °C
Rated temperature T_R	+85 °C
Rated current I_R	Max. permissible DC with temperature increase of ≤ 40 K at rated temperature
Saturation current I_{sat}	Max. permissible DC with inductance decrease $\Delta L/L_0$ of approx. 10%
DC resistance R_{max}	Measured at +20 °C
Solderability (lead-free)	Dip and look method 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, 40 s (as referenced in JEDEC J-STD 020D)
Climatic category	55/150/56 (to IEC 60068-1)
Storage conditions	Mounted: -55 °C ... +150 °C Packaged: -25 °C ... +40 °C, $\leq 75\%$ RH
Weight	Approx. 2 g

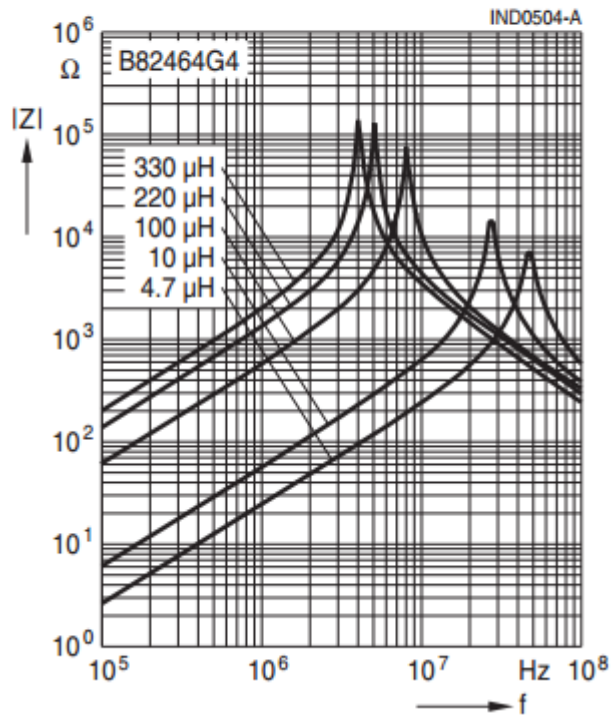
Characteristics and ordering codes

L_R μH	Tolerance	f_L MHz	I_R A	I_{sat} A	R_{max} Ω	Ordering code
0.82	$\pm 20\% \triangleq M$	0.1	7.60	10.3	0.007	B82464G4821M000
1.0		0.1	7.50	10.0	0.007	B82464G4102M000
1.5		0.1	7.00	8.50	0.009	B82464G4152M000
2.2		0.1	6.50	7.00	0.010	B82464G4222M000
3.3		0.1	5.50	5.90	0.012	B82464G4332M000
4.7		0.1	4.90	5.20	0.015	B82464G4472M000
6.8		0.1	4.30	4.60	0.020	B82464G4682M000
10		0.1	3.40	3.50	0.030	B82464G4103M000
15		0.1	2.75	3.10	0.040	B82464G4153M000
22		0.1	2.25	2.50	0.052	B82464G4223M000
33		0.1	1.85	2.10	0.075	B82464G4333M000
47		0.1	1.55	1.80	0.095	B82464G4473M000
68		0.1	1.30	1.45	0.13	B82464G4683M000
100		0.1	1.05	1.15	0.22	B82464G4104M000
150		0.1	0.85	0.90	0.32	B82464G4154M000
220		0.1	0.70	0.75	0.44	B82464G4224M000
330		0.1	0.59	0.65	0.65	B82464G4334M000
470		0.1	0.50	0.55	0.93	B82464G4474M000
680		0.1	0.42	0.46	1.30	B82464G4684M000
1000	0.1	0.34	0.35	2.20	B82464G4105M000	

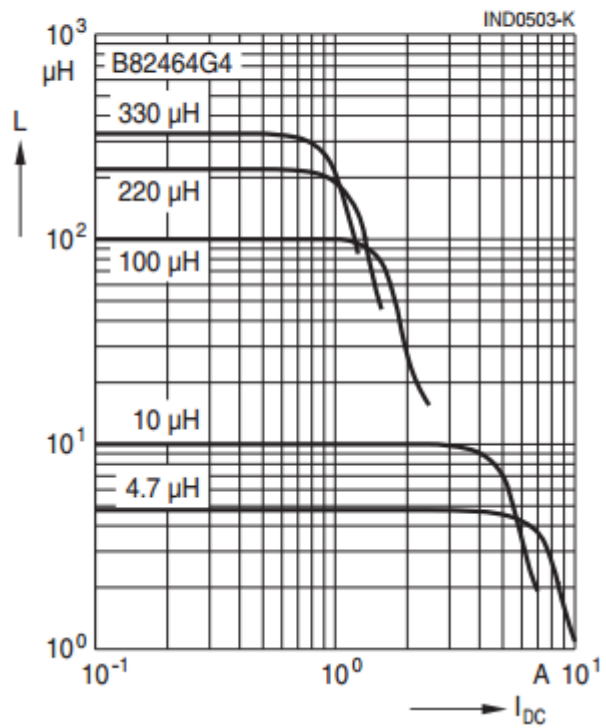
Sample kit available. Ordering code: B82464X004

For more information refer to chapter "Sample kits".

Impedance $|Z|$ versus frequency f
 measured with impedance analyzer
 Agilent 4294A, typical values at +20 °C



Inductance L versus DC load current I_{DC}
 measured with LCR meter Agilent 4275A,
 typical values at +20 °C



Current derating I_{op}/I_R
versus ambient temperature T_A
 (rated temperature $T_R = +85$ °C)

