SMT power inductors

Size 12.8 × 12.8 × 8.0 (mm)

B82477G4

SMD

Rated inductance 1 ... 1000 µH
Rated current 0.55 ... 9.8 A

Construction

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

Features

- Temperature range up to +125 °C
- Very high rated current
- Low DC resistance
- Suitable for lead-free reflow soldering
- RoHS-compatible

Applications

- DC/DC converters
- EDP (Electronic Data Processing)
- Consumer electronics
- Industrial electronics

Terminals

- Base material
  Cu (L ≤ 10 µH), CuSn6P (L ≥ 15 µH)
- Layer composition Ni, Sn (lead-free)
- Electro-plated

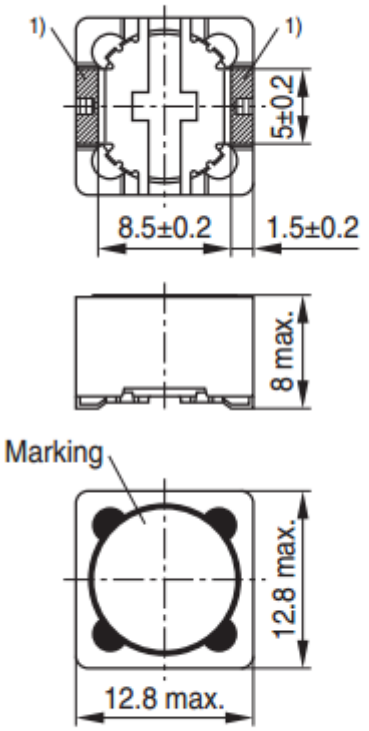
Marking

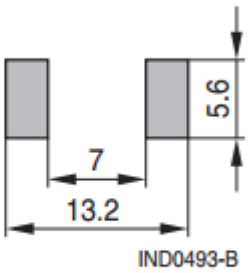
- Marking on component:
  Manufacturer, L value (µH, coded),
  manufacturing date (YWWD)
- Minimum data on reel:
  Manufacturer, ordering code, L value,
  quantity, date of packing

Delivery mode and packing unit

- 24-mm blister tape, wound on 330-mm ∅ reel
- Packing unit: 400 pcs./reel

Dimensional drawing and layout recommendation





IND0493-B

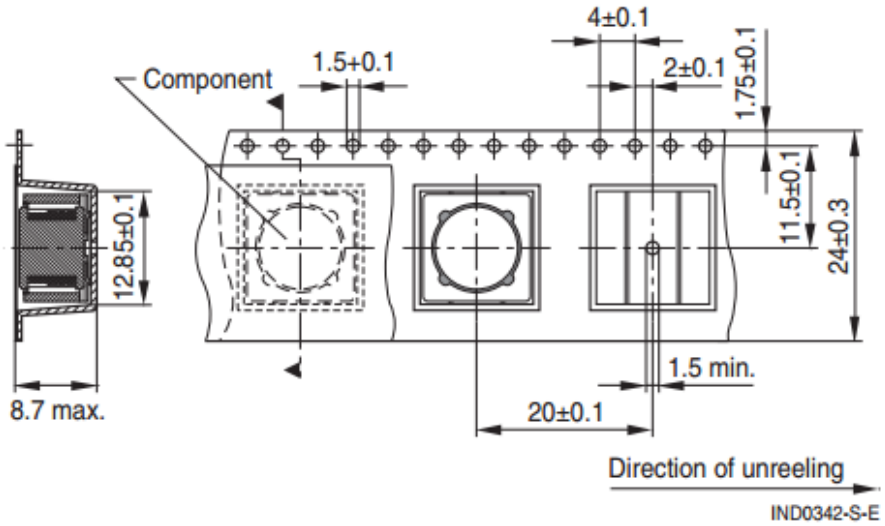
1) Soldering area

Dimensions in mm

IND0492-V-E

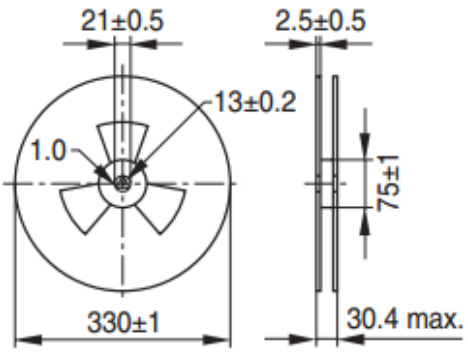
Taping and packing

Blister tape



IND0342-S-E

Reel



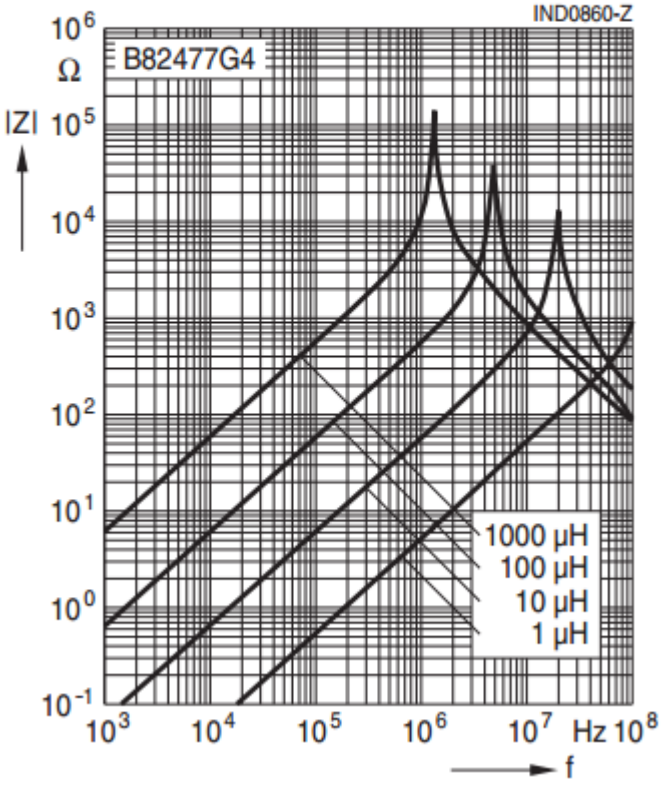
IND0348-6

Dimensions in mm

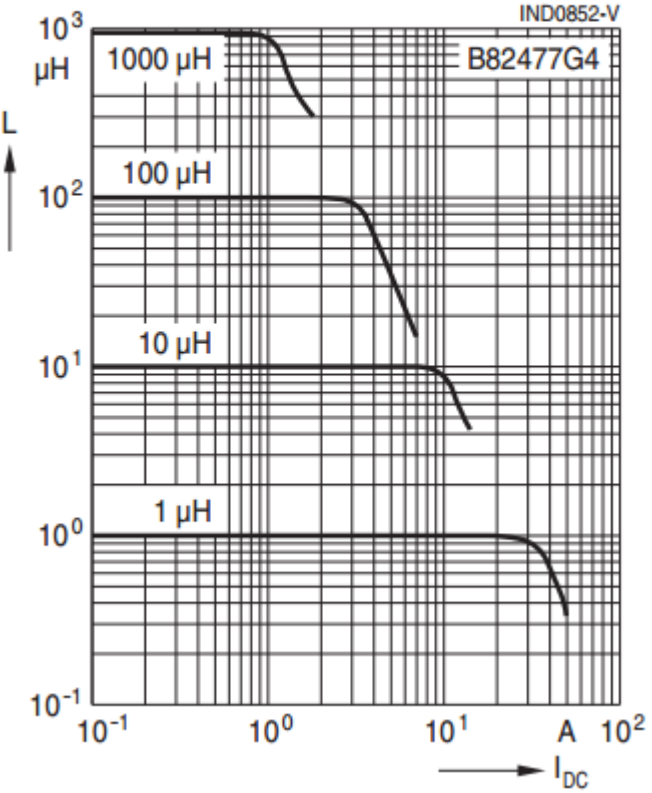
Technical data and measuring conditions

Rated inductance L_R	Measured with LCR meter Agilent 4284A 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 ±5) °C, (5 ±0.3) s Wetting of soldering area ≥ 90% (based on IEC 60068-2-58)
Resistance to soldering heat	+260 °C, 10 s (based on IEC 60068-2-58)
Climatic category	55/125/56 (to IEC 60068-1)
Storage conditions	Mounted: –55 °C … +125 °C Packaged: –25 °C … +40 °C, ≤ 75% RH
Weight	Approx. 4.2 g

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



Characteristics and ordering codes

L_R µH	Tolerance	f_L MHz	I_R A	I_{sat} A	R_{max} Ω	Ordering code
1.0	±20% ≙ M	0.1	9.80	15.00	0.0070	B82477G4102M000
2.2		0.1	8.00	11.00	0.0100	B82477G4222M000
3.9		0.1	7.50	9.50	0.0125	B82477G4392M000
4.7		0.1	6.80	8.60	0.0140	B82477G4472M000
5.6		0.1	6.70	8.40	0.0142	B82477G4562M000
6.8		0.1	6.50	7.30	0.0185	B82477G4682M000
10		0.1	5.40	6.40	0.022	B82477G4103M000
15		0.1	4.50	5.25	0.027	B82477G4153M000
22		0.1	3.60	4.25	0.038	B82477G4223M000
33		0.1	3.00	3.50	0.053	B82477G4333M000
47		0.1	2.50	3.00	0.082	B82477G4473M000
68		0.1	2.10	2.45	0.120	B82477G4683M000
82		0.1	1.90	2.25	0.145	B82477G4823M000
100		0.1	1.70	1.95	0.165	B82477G4104M000
150		0.1	1.42	1.70	0.225	B82477G4154M000
220		0.1	1.16	1.35	0.380	B82477G4224M000
330		0.1	0.95	1.15	0.600	B82477G4334M000
470		0.1	0.80	0.95	0.790	B82477G4474M000
680		0.1	0.68	0.78	1.24	B82477G4684M000
1000		0.1	0.55	0.65	1.68	B82477G4105M000

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