



SMT current sense transformers

E 4.2 core

L_{\min} 33 μH ... 1280 μH , sensed current 7 A

Series/Type: B82801A

Date: September 2008, September 2009

Applications

- Switching power supplies
- Feedback control
- Overload sensing
- Load drop/shut down detection

Features

- Very low DC resistance
- Different turns ratios
- Very small package
- RoHS-compatible

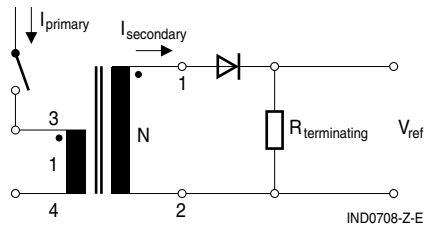
Marking

No marking on component

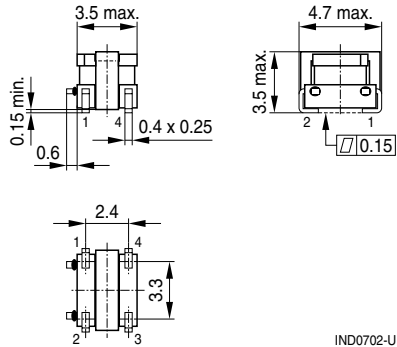
Delivery mode and packing units

- 12-mm blister tape, 178-mm \varnothing reel
- Carton packaging
- Packing units: 600 pcs./reel;
3000 pcs./carton

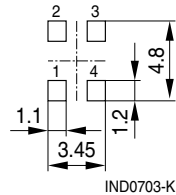
Application circuit and pinning



Dimensional drawing



Layout recommendation



Dimensions in mm

Technical data and measuring conditions

Frequency range	50 kHz ... 1 MHz
Inductance L (1-2)	100 kHz, 1.0 V, 25 °C
DC resistance R_{\max}	Measured at 25 °C
Sensed current	The max. primary current of 5 A cause approx. 40 °C temperature rise
Test voltage V_{test}	50 Hz, 1 s
Operating temperature range	-40 °C ... +125 °C
Weight	Approx. 0.15 g

Characteristics and ordering codes

L_{\min} μH	Turns ratio $N_p : N_s$	DC resistance R_{\max} (m Ω)		Sensed current A	V_{test} V AC	Ordering code
		primary	secondary			
33	1 : 20	2.5	320	7	360	B82801A0333A020
74	1 : 30	2.5	800	7	360	B82801A0743A030
132	1 : 40	2.5	1300	7	360	B82801A0134A040
205	1 : 50	2.5	2200	7	360	B82801A0214A050
295	1 : 60	2.5	3600	7	360	B82801A0304A060
400	1 : 70	2.5	4600	7	360	B82801A0404A070
820	1 : 100	2.5	8700	7	360	B82801A0824A100
1280	1 : 125	2.5	13000	7	360	B82801A0135A125

Cautions and warnings

- Please note the recommendations in our Inductors data book (latest edition or in the internet) and in the data sheets.
 - Particular attention should be paid to the derating curves given there.
 - The soldering conditions should also be observed. Temperatures quoted in relation to wave soldering refer to the pin, not the housing.
- If the components are to be washed varnished it is necessary to check whether the washing varnish agent that is used has a negative effect on the wire insulation, any plastics that are used, or on glued joints. In particular, it is possible for washing varnish agent residues to have a negative effect in the long-term on wire insulation.
- The following points must be observed if the components are potted in customer applications:
 - Many potting materials shrink as they harden. They therefore exert a pressure on the plastic housing or core. This pressure can have a deleterious effect on electrical properties, and in extreme cases can damage the core or plastic housing mechanically.
 - It is necessary to check whether the potting material used attacks or destroys the wire insulation, plastics or glue.
 - The effect of the potting material can change the high-frequency behaviour of the components.
- Ferrites are sensitive to direct impact. This can cause the core material to flake, or lead to breakage of the core.
- Even for customer-specific products, conclusive validation of the component in the circuit can only be carried out by the customer.

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