SHDSL interface transformers

for Infineon ICs Socrates family
EP 13, 3.018 mH, 1.62:1.62:1:1

Series/Type: **B78421A1801A003**

Date: October 2012

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SMD

Application

- Matched to Infineon ICs
  Socrates, Socrates-u, Socrates-4
  PEF 22622, 22623, 24622

Features

- According to EN 60950, supplementary insulation, operating voltage 250 V
- RoHS-compatible

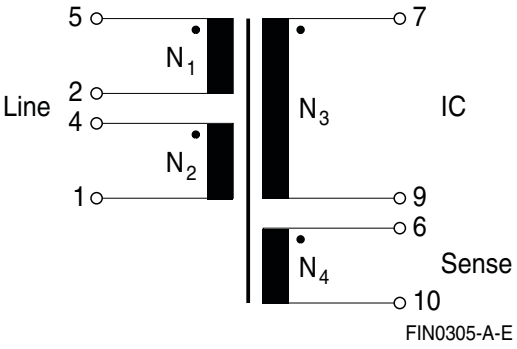
Marking

- Manufacturer, middle block of ordering code, date code

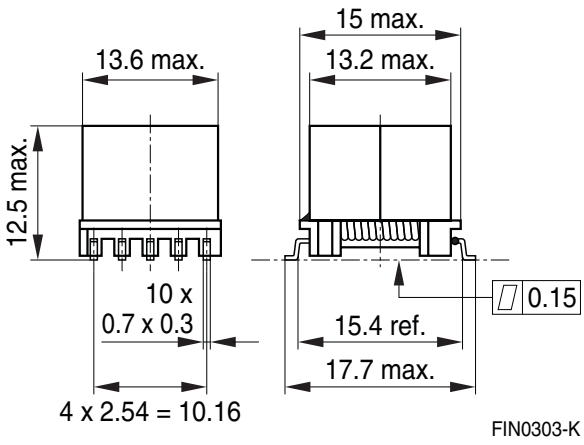
Delivery mode and packing unit

- 32-mm blister tape
- Packing unit: 200 pcs.

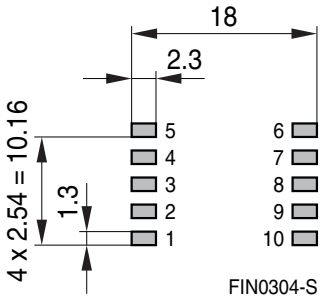
Pinning



Dimensional drawing



Layout recommendation



Dimensions in mm

SMD

Technical data and measuring conditions

Main inductance L (1-5)	10 kHz, 100 mV, short 2-4
Stray inductance L_{stray} (1-5)	100 kHz, 100 mV, short (2-4), (7-9)
Resistance $R_{DC\ (Line)}$; $R_{DC\ (IC)}$	$R_{DC\ (Line)}$: short 2-4; $R_{DC\ (IC)}$: –
Test voltage V_{test}	50 Hz, 1 s; N_1, N_2 against N_3
Total harmonic distortion THD	V_{RMS} = 1 V, 135 Ω, 3 kHz, line side
Operating temperature range	–40 °C … +85 °C
Weight	Approx. 6.0 g

Characteristics and ordering code

(electrical specifications at +25 °C)

Ordering code	B78421A1801A003	
Type/Core	EP 13	
$N_1 : N_2 : N_3 : N_4$	1.62 : 1.62 : 1 : 1	
L	3.018 ±6%	mH
L_{stray} (typ.)	20	µH
$R_{DC\ (Line)}$ (typ.)	3.5	Ω
$R_{DC\ (IC)}$ (typ.)	0.8	Ω
$R_{DC\ (Sense)}$ (typ.)	4.4	Ω
V_{test}	2000	V AC
THD (typ.)	75	dB

Cautions and warnings

- Please note the recommendations in our Inductors data book (latest edition) 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.
  Washing processes may damage the product due to the possible static or cyclic mechanical loads (e.g. ultrasonic cleaning). They may cause cracks to develop on the product and its parts, which might lead to reduced reliability or lifetime.
- 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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