SHDSL interface transformer

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

Ordering code: **B78421A1801A003**

Date: October 2008

SMD

Application

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

Features

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

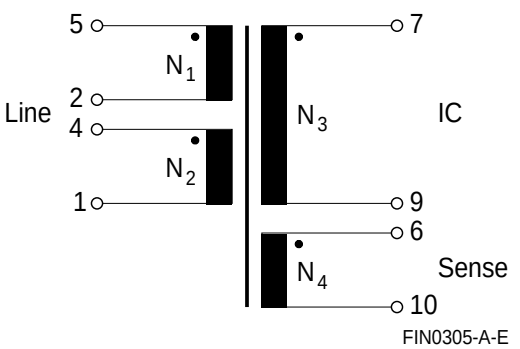
Marking

- Manufacturer, middle block of ordering code, date code

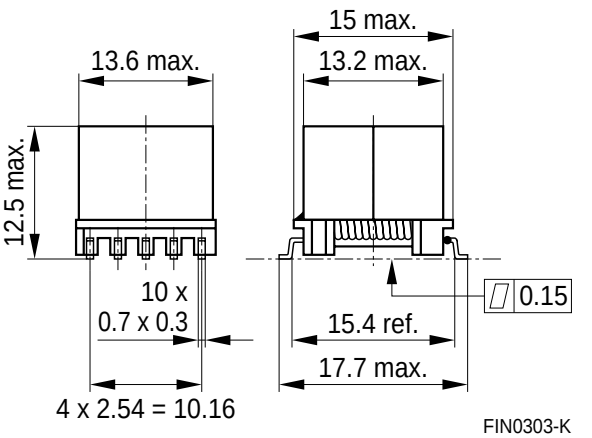
Delivery mode and packing unit

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

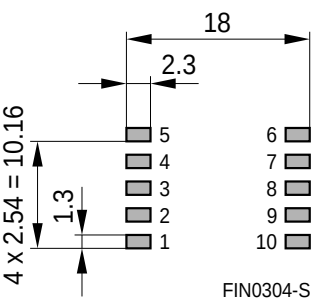
Pinning



Dimensional drawing



Layout recommendation



Dimensions in mm

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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.
- 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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