



## **ADSL interface transformer**

for Broadcom ICs Bladerunner  
EP 7, 99.07  $\mu$ H, 1.41:1.41:1:1

**Ordering code:**        **B78417A1764A003**

**Date:**                **March 2008**

**SMD**

**Application**

- Matched to Broadcom ICs Bladerunner BCM6410, 6420, 6411, 6421, 6511
- Annex B

**Feature**

- RoHS-compatible

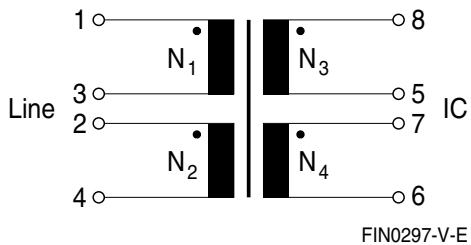
**Marking**

- Manufacturer, middle block of ordering code, date code

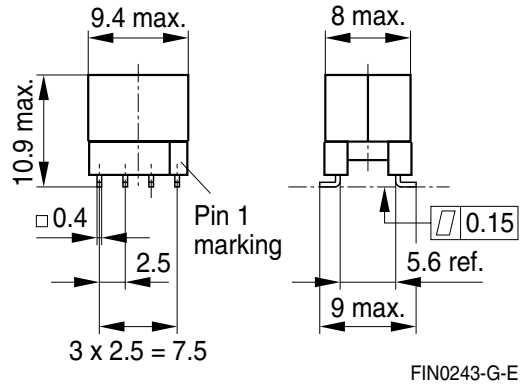
**Delivery mode and packing unit**

- 24-mm blister tape
- Packing unit: 320 pcs.

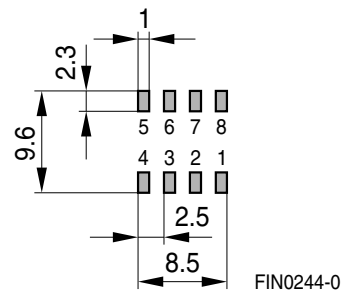
**Pinning**



**Dimensional drawing**



**Layout recommendation**



Dimensions in mm

**Technical data and measuring conditions**

Main inductance L (1-4)	10 kHz, 100 mV, short 2-3
Stray inductance $L_{\text{stray}}$ (1-4)	100 kHz, 100 mV, short 5-6-7-8, 3-2
Resistance $R_{\text{DC (Line)}}$ ; $R_{\text{DC (IC)}}$	$R_{\text{DC (Line)}}$ : short 2-3; $R_{\text{DC (IC)}}$ : short 5-7
Test voltage $V_{\text{test}}$	50 Hz, 1 s; $N_1$ , $N_2$ against $N_3$ , $N_4$
Longitudinal balance	20 ... 200 kHz
Total harmonic distortion THD	$V_{\text{RMS}} = 3.16 \text{ V}$ , 100 $\Omega$ , 100 kHz
Operating temperature range	-40 °C ... +85 °C
Weight	Approx. 2.0 g

**Characteristics and ordring code**

(electrical specifications at 25 °C)

Ordering code	B78417A1764A003	
Type/Core	EP 7	
$N_1 : N_2 : N_3 : N_4$	1.41 : 1.41 : 1 : 1	
L	99.07 $\pm$ 5%	$\mu\text{H}$
$L_{\text{stray}}$	< 10	$\mu\text{H}$
$R_{\text{DC (Line)}}$ (typ.)	0.67	$\Omega$
$R_{\text{DC (IC)}}$ (typ.)	0.61	$\Omega$
$V_{\text{test}}$	2000	V AC
Longitudinal balance (typ.)	> 50	dB
THD (typ.)	90	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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