# SMT transformer for ultrasonic sensors

EP 6 series

| | |
|---|---|
| **Series/Type:** | **B78416** |
| **Ordering code:** | **B78416A2232A003** |
| Date: | 2014-10-02 |
| Version: | 1 |



EPCOS AG is a TDK Group Company.

Preliminary data

## Construction

- EP 6 type with ferrite core
- 5 U-shape terminals

## Applications

Ultrasonic transceiver driver used for

- Ultrasonic park assist
- Industrial distance measuring
- Robotics

## Features

- Resistance to reflow soldering heat in accordance with JEDEC J-STD-020D with 245 °C for 10 seconds
- MLS level 1
- RoHS compatible

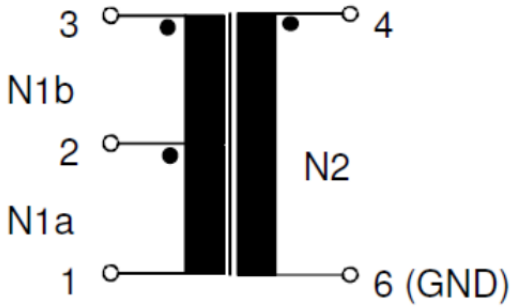
## Marking

- Manufacturer, middle block of ordering code, date code, pin1 marker

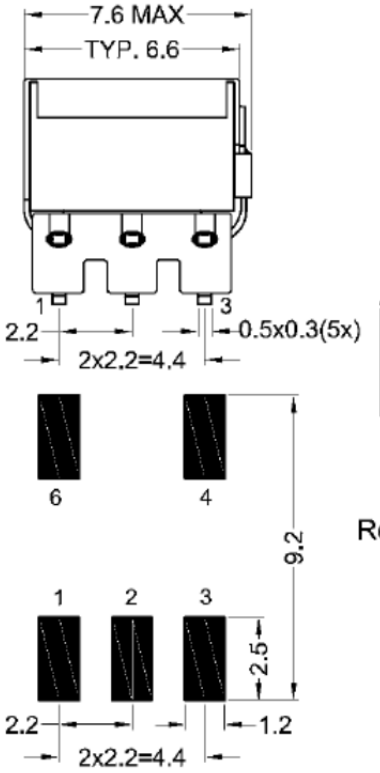
## Delivery mode and packing unit

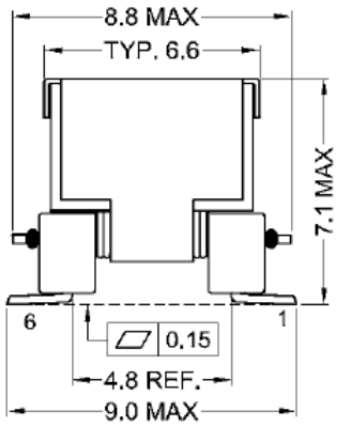
- 24-mm blister tape, 380-mm Ø reel
- Packing unit : 900 pcs./ reel

## Schematic




## Dimensional drawing




Recommended PCB Layout
(Top View)

Dimensions in mm

Preliminary data

## Technical data and measuring conditions

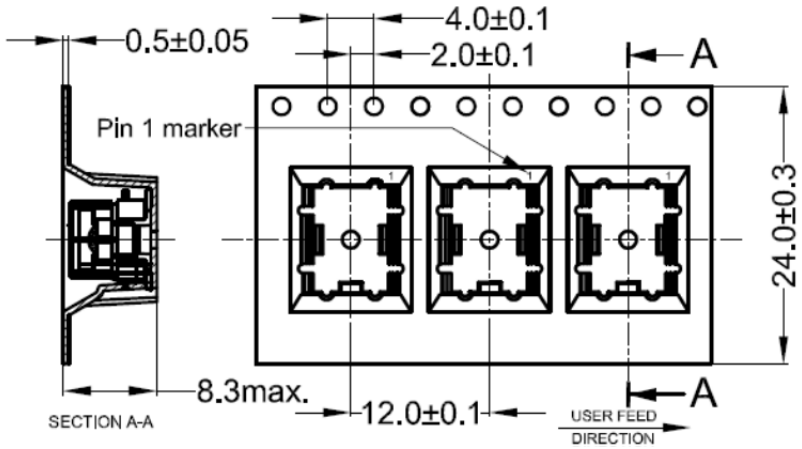
| | |
|---|---|
| Main inductance L (4 – 6) | 3 mH (52 kHz, 1 V, +25 °C) |
| Inductance tolerance | ±10% at +25 °C |
| Turns ratio | 1 : 1 : 8.42 |
| Operating frequency f | 52 kHz |
| Test voltage $V_{test}$ | 200 V AC |
| Operating temperature range | –40 °C … +85 °C |

## Ordering code

B78416A2232A003

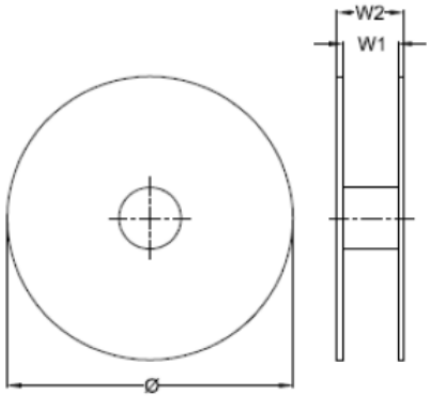
## Taping and packing

- Blister tape




Dimensions in mm

- Reel
  Ø: 380 mm, W1: 24.4 mm, W2: 30.4 mm



Preliminary data

## 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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