SMD Flyback Transformer

875 µH; 7 : 1 : 1

Series/Type:	**E20 EM series**
Ordering code:	**B78311A2439A003**
Date:	2020-03-27
Version:	01

Construction

- Ferrite core
- Gullwing pins
- Insulated wire, UL 60950-1, Annex U
- Plastic bobbin (UL94-V0, CTI ≥ 175)

Features

- Height: 17.3 mm max
- Footprint: 28.4 x 26 mm
- RoHS compatible
- Qualification: AEC-Q200
- Design according to IEC 61558-2-16 for basic and reinforced insulation

Applications

- DC/DC converters (Flyback topology)
- Applicable voltage U_{RMS} for 5000m above sea level for basic insulation: 500 V; and for reinforced insulation: 230 V (e.g. for pollution degree P2, OVC II according to IEC 61558-2-16)

Terminals

- SMD

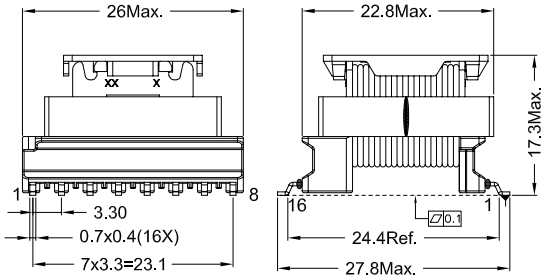
Marking

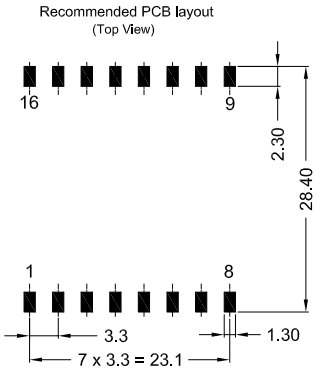
- Product brand, middle block of ordering code, date code, pin 1 marker, production place identification code

Delivery mode

- Blister tape
- Packing unit tbd pcs per reel

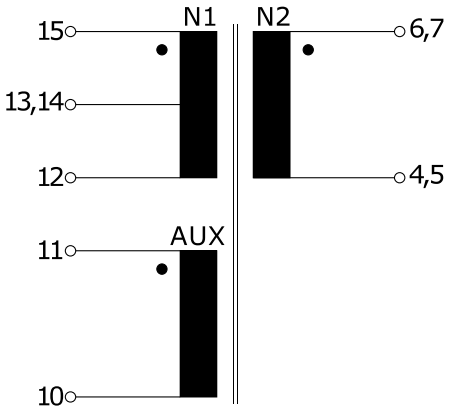
Dimensional drawings / layout recommendation





Dimensions in mm

Circuit diagram



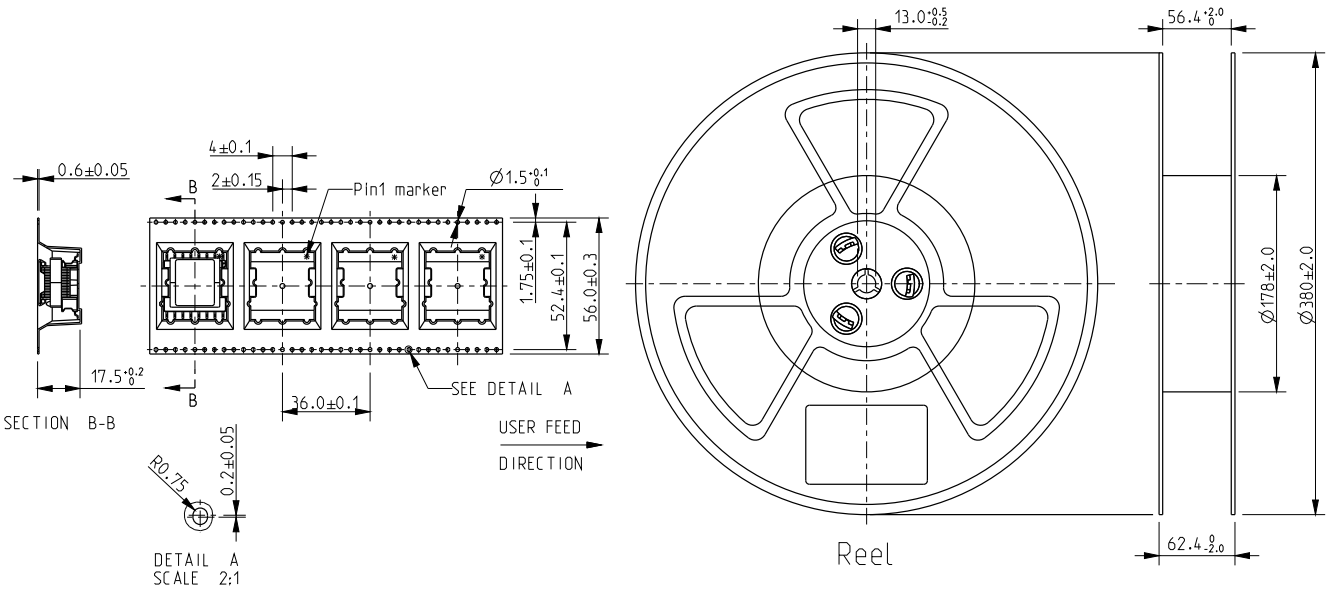
Short pins on PCB:
(4,5); (6,7); (13,14)

Technical data and measuring conditions

Specified @ +25 °C if not mentioned otherwise, all values without tolerance are typical values

Operational frequency	70 kHz (typ.)
High Voltage test (N1, AUX) / N2	1 kV AC (50 Hz, 1 s)
Turns ratio N1 : AUX : N2	7 : 1 : 1
Inductance L (N1)	875 µH ±15% @ 50 kHz, 50 mV, short (13,14)
Leakage inductance LL (N1)	15 µH @ 50 kHz, 50 mV, short (10,11); (13,14); (4,5,6,7)
Saturation current I_{Sat} N1	1.35 A (L=Lnom -20%)
R_{DC} N1	2.3 Ω, short (13,14)
R_{DC} AUX	550 mΩ
R_{DC} N2	110 mΩ, short (6,7) and (4,5)
I_{RMS} N1	700 mA
U(input)	250…1000V (typ.)
Resistance to reflow soldering heat	In accordance with JEDEC J-STD-020D +245 °C (Tpeak -5°C for 30 seconds)
Operating temperature range	−40 °C … +150 °C (component)
Weight	Approx. 11.4 g

Blister tape and reel



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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Important notes

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