



E13 EMHV SMD Transformer

Series/Type: P303093-A1-51

Ordering code:

Date: 2021-11-30

Version: 2

E13 EMHV SMD Transformer

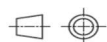
P303093-A1-51

Preliminary data

Specification: Flyback transformer, Vin= 9-26V, Vout= 12V, 19V, Fsw= 200kHz.

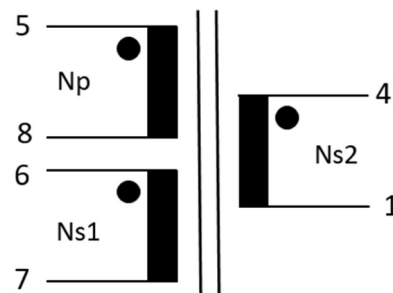
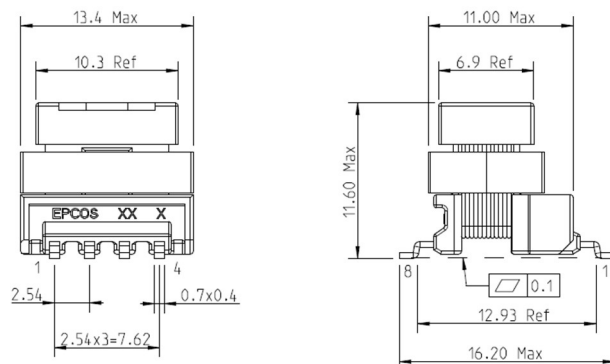
Part tolerance to ISO 2768-cl / ISO 8015

Size ISO 14405 ⑤

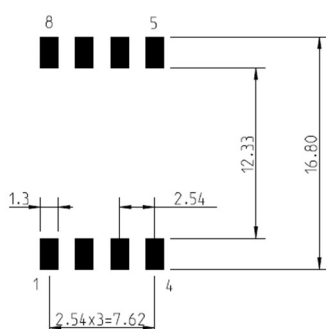


■ Dimensions in mm (all dimensions without tolerances are typical values)

Schematic:



Recommended PCB-Layout
(Top view)



Marking:

pin1 marker

EPCOS

middle block of ordering code

data code/production place(1 letter)

Electrical Characteristics: (specified @25°C if not mentioned otherwise) *) typical value

All values without tolerances are typical values

Inductance: L(5-8)	20 μ H \pm 20%	100kHz, 100mV
Leakage inductance LL (5-8)	0.2 μ H	100kHz, 100mV, short(1,4,6,7)
HV: (Np, Ns1)/ Ns2	2000 Vac	50Hz, 1sec
T/R Np: Ns1: Ns2	11: 16: 24	
DC resistance Np	200 m Ω	
DC resistance Ns1	320 m Ω	
DC resistance Ns2	700 m Ω	
Saturation Current Isat Np	1A	L = Lo-20%, T = 150 °C

Packaging:

Blister tape: 190 pcs

- Type test: (Np, Ns1)/ Ns2=2000Vac, 50Hz, 60 sec.

- Creepage distance (Np, Ns1)/ Ns2= 10 mm
(cumulative, core floating)

- Clearance distance (Np, Ns1)/ Ns2= 8.14 mm
(cumulative, core floating)

Material:

Bobbin CTI \geq 175

Operation temperature: -40°C ~ +150°C (Component)

Preliminary data

Cautions and warnings

- Additional information is contained in our data books, which are also available on the internet. Particular attention should be paid to the derating curves given there. The soldering conditions given there should also be observed. Temperatures quoted in relation to wave soldering refer to the pin, not to the housing.
- If the components are to be washed varnished, it is necessary to check whether any 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 potted 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 components in the circuit can only be carried out by the customer.

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Important notes

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