

TV4xxx Lamination, PCB Mounted Voltage Transformers

The YUANXING TV4xxx series of lamination, PCB Mounted voltage transformers are designed for applications where the primary AC voltage signal must be transformed accurately into a lower secondary AC voltage signal appropriate for micro-processor based circuit designs.

These printed circuit board (PCB) mounted voltage transformers are designed to provide exceptional primary signal transformation accuracy with low phase shift while operating in harsh operating environments. The potential transformers (PT)/ voltage transformers (VT) feature high dielectric insulation and asymmetrical mounting packages.



Features

- Asymmetrical mounting pattern.
- Core lamination using Silicon steel or Nickel Alloy material.
- Printed circuit board mounted (PIH)

Specifications

- Frequency: 50 to 400 Hz
- Isolation Voltage: 2500 V_{RMS} for 1 minute
- Dielectric Resistance: 1000 M Ohms @ 500 Vdc
- Surge Withstand: 5,000V (1.2/50 μ s standard shock wave)
- Operating Temperature: -25°C to +55°C
Optional: -40°C to +85°C
- Rated Load Resistance: 100K Ohms
- **RoHS Compliant**



Performance

- Secondary Output: Optional voltage from 0.100V to 7.07V @ Rated voltage.
- Accuracy Class: 0.2, 0.5 (IEC 60044-2 Part 2, Voltage Transformers).

Options:

- The secondary output can be designed to provide any voltage between 100mV to 7.07V at Rated Voltage input.
- The voltage transformer can be configured for panel mounting with leads. Standard lead length is 0.6m (2 Ft.). Lead length and lead termination can be designed to meet the specific application requirements.

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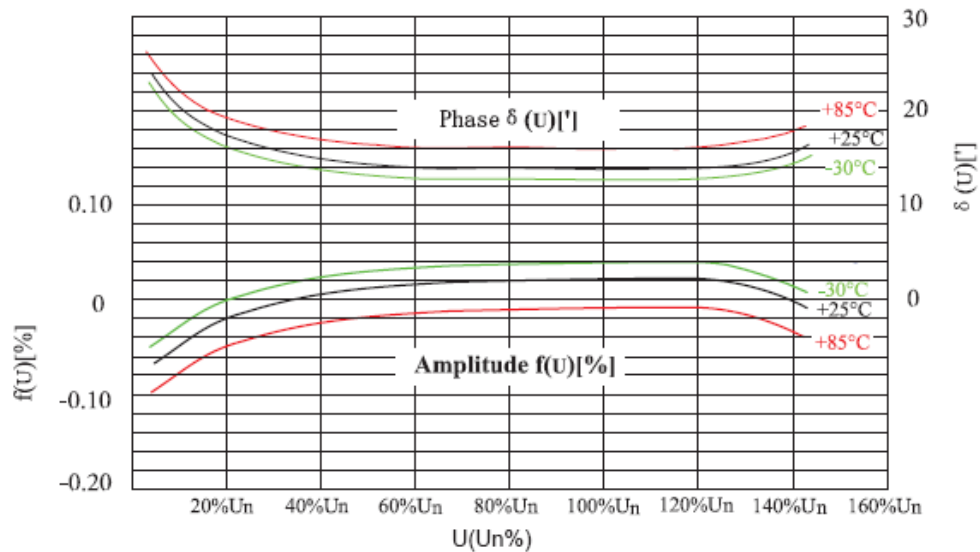
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Standard Models – PCB Mounted

Part Number	Rated Voltage	Excitation Current (mA)	Accuracy Class	Phase Error at rated Voltage	Linearity
TV4085	Input: 100V, 220V, 240V, 400V Output: 100mV--7.07V(Optional)	≤0.5	0.2, 0.5	≤20'	5% to 120% of Rated Voltage
TV4105	Input: 100V, 220V, 240V, 380V Output: 100mV--7.07V(Optional)	≤0.5	0.2, 0.5	≤20'	5% to 120% of Rated Voltage
TV4095	Input: 100V, 220V, 240V, 380V Output: 100mV--7.07V(Optional)	≤0.5	0.2 0.5	≤20'	5% to 120% of Rated Voltage
TV4135	Input: 220V, 240V, 380V, 600V Output: 100mV--7.07V(Optional)	≤0.5	0.2, 0.5	≤20'	5% to 120% of Rated Voltage

Typical Performance - Amplitude & Phase Shift Error



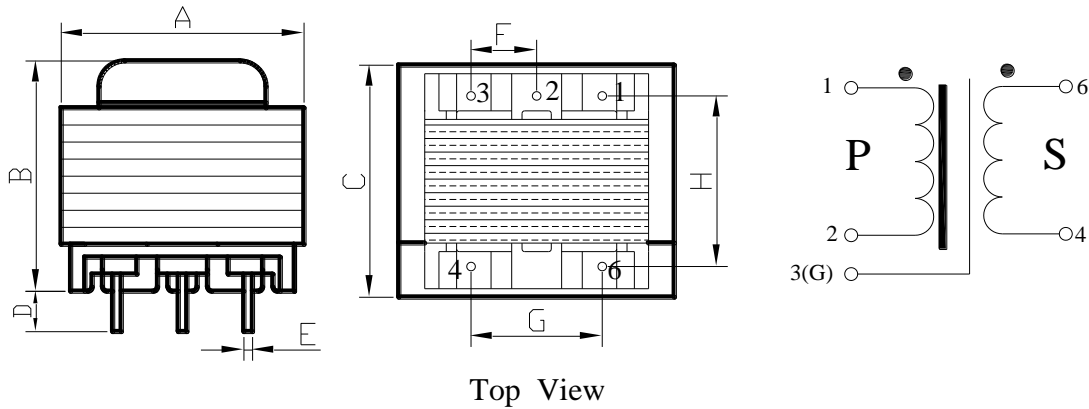
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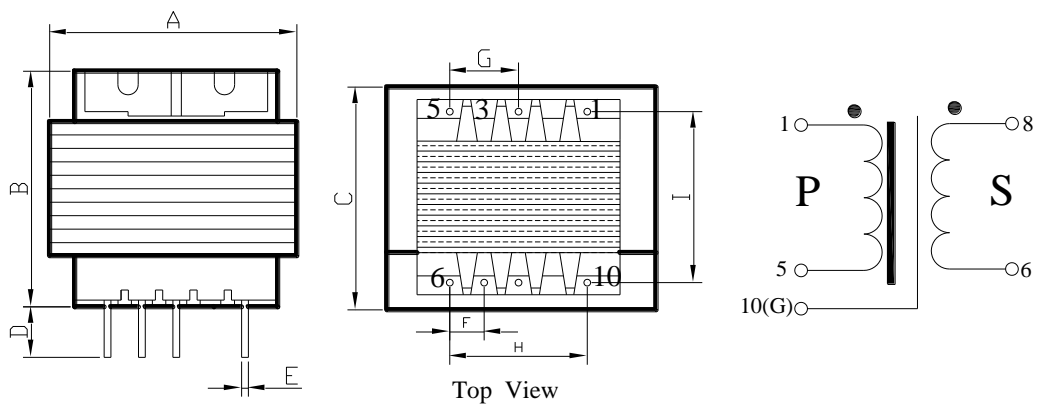
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Outline Drawing:



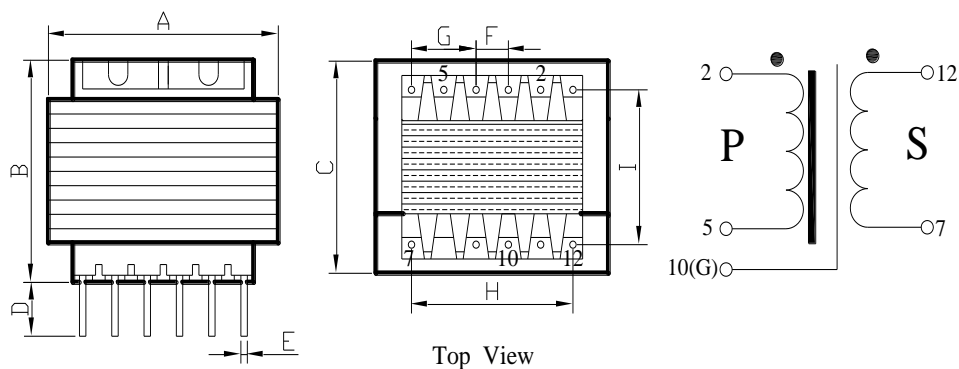
TV4085 Outside Dimensions and Winding Schematic



TV4095\TV4135 Outside Dimensions and Winding Schematic

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TV4105 Outside Dimensions and Winding Schematic

Outline Dimensions

Part Number	Dimensions - mm (inches)								
	A	B	C	D	E	F	G	H	I
TV4085	28.5 (1.122)	27 (1.063)	25.5 (1.00)	4 (0.157)	1 (0.039)	7.62 (0.300)	15.24 (0.600)	20 (0.7874)	---
TV4105	30.5 (1.201)	31 (1.220)	25.5 (1.00)	4 (0.157)	1 (0.039)	5.08 (0.200)	10.16 (0.400)	25.4 (1.000)	21.6 (0.850)
TV4095	35.5 (1.398)	34 (1.339)	30.5 (1.201)	4 (0.157)	1 (0.039)	5.08 (0.200)	10.16 (0.400)	20.32 (0.800)	25.4 (1.000)
TV4135	38.5 (1.516)	37 (1.457)	32.5 (1.279)	4 (0.157)	1 (0.039)	5.08 (0.200)	10.16 (0.400)	20.32 (0.800)	25.4 (1.000)

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Notes:

TV4085 Packaging:

Carton - 200mm (7.9") x 155mm (6.1") x 48mm (1.9"), 42 pcs per carton

Bulk pack carton - 320mm (12.6") x 210mm (8.3") x 200mm (7.9"), 420 pcs/ bulk pack

TV4105 Packaging:

Carton - 200mm (7.9") x 155mm (6.1") x 48mm (1.9"), 36 pcs per carton

Bulk pack carton - 320mm (12.6") x 210mm (8.3") x 200mm (7.9"), 288 pcs/ bulk pack

TV4095 Packaging:

Carton - 200mm (7.9") x 155mm (6.1") x 48mm (1.9"), 25 pcs per carton

Bulk pack carton - 320mm (12.6") x 210mm (8.3") x 200mm (7.9"), 200 pcs/ bulk pack

TV4135 Packaging:

Carton - 200mm (7.9") x 155mm (6.1") x 48mm (1.9"), 24 pcs per carton

Bulk pack carton - 320mm (12.6") x 210mm (8.3") x 200mm (7.9"), 192 pcs/ bulk pack

Custom voltage transformer designs are available to meet the specific application requirements. For a no obligation technical evaluation, please provide the specific performance requirements to applicationengineering@tichenassociates.com or the address below.

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