

Lamination, PCB Mounted Voltage Transformer

The **TV3xxx** 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

- Five (5) standard sizes.
- 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 Vac for 1 minute.
- Dielectric Resistance: 1000 M Ohms @ 500 Vdc.
- Surge Withstand: 5000V.
- Operating Temperature: -25°C to +55°C.
Optional: -40°C to +85° C.
- Construction:
 - Exterior Material: ABS or PBT Resin.
 - Interior Insulation: Epoxy resin encapsulated.
- Secondary Burden Resistance: $\geq 100K$ Ohms
- **RoHS Compliant**
- **CE approved**



Performance:

- Secondary Output: Optional voltage from 0.10V to 7.07V @ Rated Voltage.
- Accuracy Class: as defined in IEC 60044-2 Part 2, Voltage Transformers.
- Voltage Error: $\leq \pm 0.2\%$.
- Phase Shift Error: $\leq 20'$.
- Linearity: 5% - 120% of Rated Voltage.
- Excitation Current: ≤ 0.5 mA.



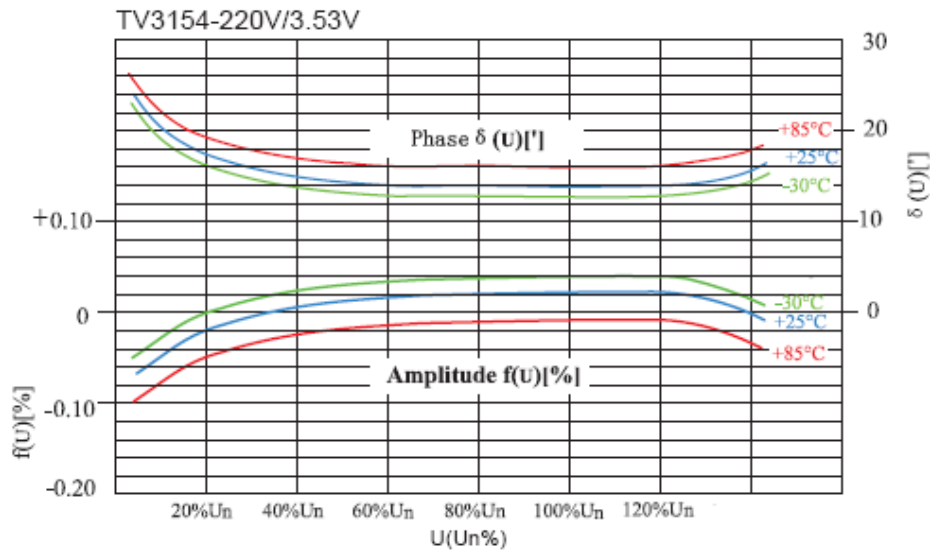
Options:

- 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.

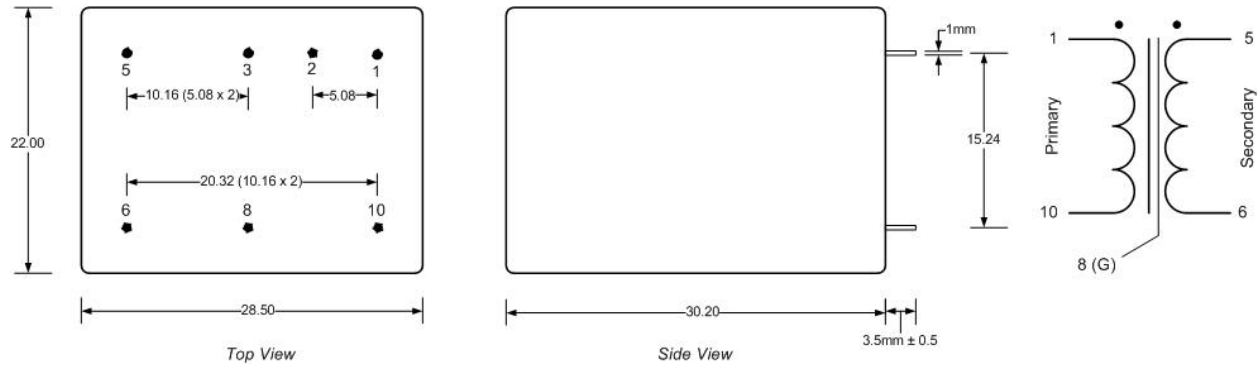
Performance:

| Part Number | Rated Voltage | Excitation Current (mA) | Accuracy Class | Phase Error at rated Voltage | Linearity |
|-------------|--|-------------------------|----------------|------------------------------|-----------------------------|
| TV3051 | Input : 100V, 220V, 240V Output : 100mV--7.07V(Optional) | ≤0.5 | 0.5 | ≤20' | 5% to 120% of Rated Voltage |
| TV3154 | Input : 100V, 220V, 240V, 400V, Output : 100mV--7.07V(Optional) | ≤0.5 | 0.2, 0.5 | ≤20' | 5% to 120% of Rated Voltage |
| TV3253 | Input : 100V, 220V, 240V, 400V, Output : 100mV--7.07V(Optional) | ≤0.5 | 0.2, 0.5 | ≤20' | 5% to 120% of Rated Voltage |
| TV3352 | Input : 100V, 220V, 240V, 400V, Output : 100mV--7.07V(Optional) | ≤0.5 | 0.2, 0.5 | ≤20' | 5% to 120% of Rated Voltage |
| TV3452 | Input : 220V, 240V, 380V, 600V, Output : 100mV--7.07V(Optional) | ≤0.5 | 0.2, 0.5 | ≤20' | 5% to 120% of Rated Voltage |

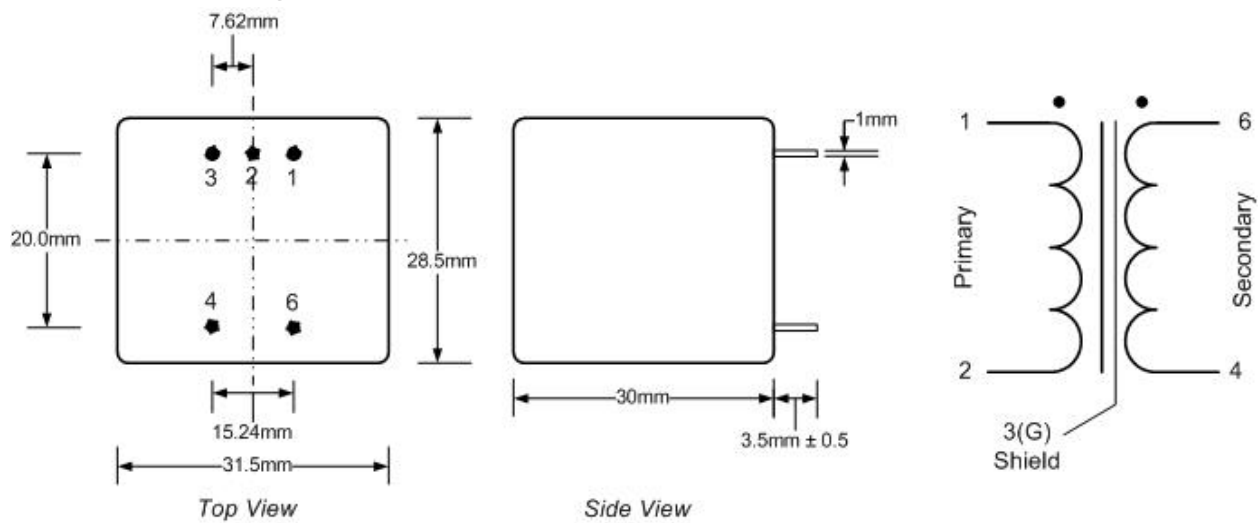
Typical Performance - Amplitude & Phase Shift Error:



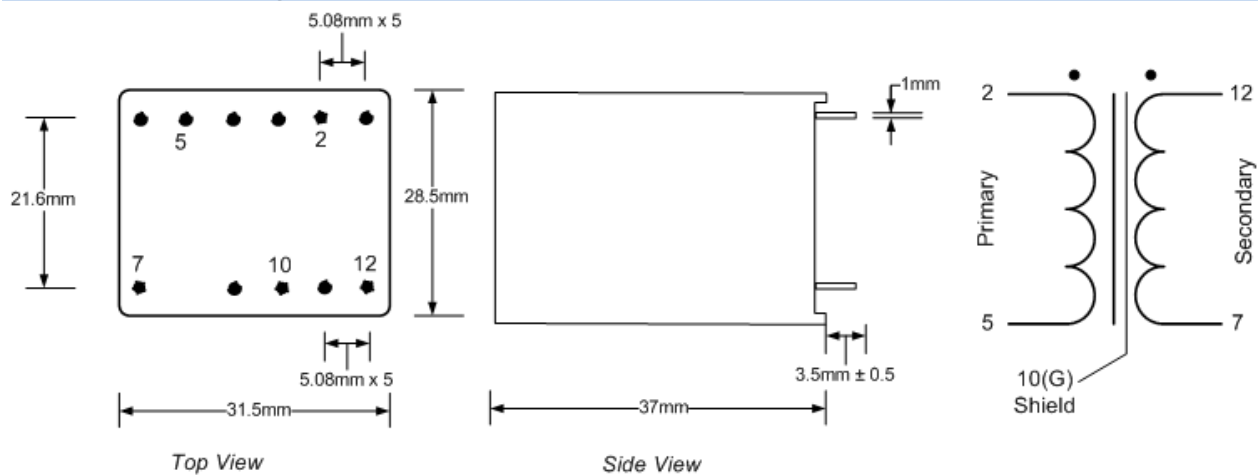
Outline Drawing – TV3051:



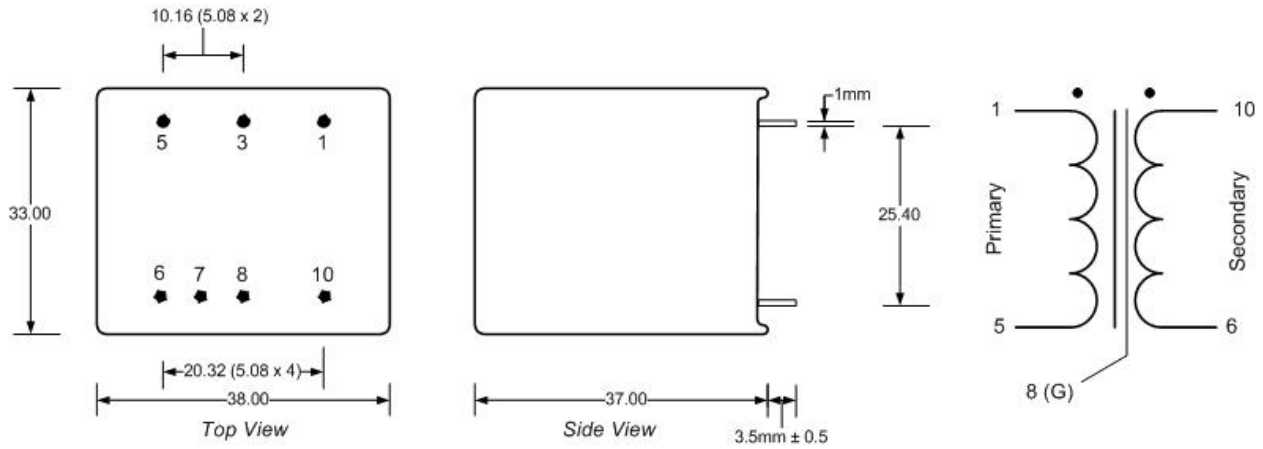
Outline Drawing – TV3154:



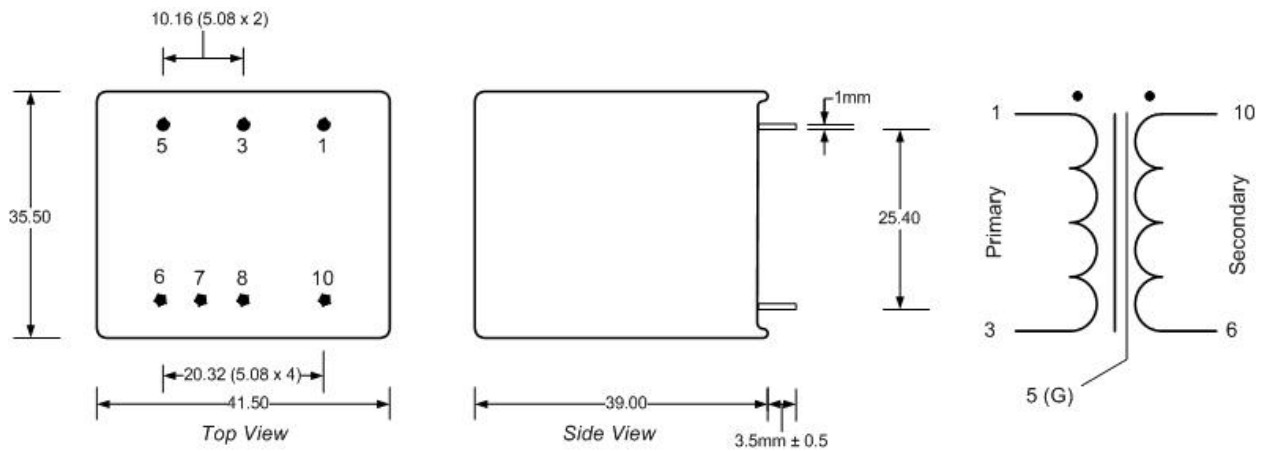
Outline Drawing – TV3253:



Outline Drawing – TV3352:



Outline Drawing – TV3452:



Notes:**TV3051 Packaging:**

Carton - 200mm (7.9") x 155mm (6.1") x 48mm (1.9"), 30 pcs per carton
Bulk pack carton - 320mm (12.6") x 210mm (8.3") x 200mm (7.9")
240 pcs per bulk pack

TV3154 Packaging:

Carton - 200mm (7.9") x 155mm (6.1") x 48mm (1.9"), 30 pcs per carton
Bulk pack carton - 320mm (12.6") x 210mm (8.3") x 200mm (7.9")
240 pcs per bulk pack

TV3253 Packaging:

Carton - 200mm (7.9") x 155mm (6.1") x 48mm (1.9"), 30 pcs per carton
Bulk pack carton - 320mm (12.6") x 210mm (8.3") x 200mm (7.9")
240 pcs per bulk pack

TV3352 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 per bulk pack

TV3452 Packaging:

Carton - 200mm (7.9") x 155mm (6.1") x 48mm (1.9"), 16 pcs per carton
Bulk pack carton - 320mm (12.6") x 210mm (8.3") x 200mm (7.9")
128 pcs per 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.