

Toroidal, PCB Mounted Voltage Transformer

The TV5xxx series of toroidal, 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.
- Toroidal Core 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 potential: 5000V (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
- Construction:
 - Exterior Material: PBT Resin, UL 94 V-0 flame retardant rating.
 - Interior Insulation: Epoxy resin encapsulated

- RoHS Compliant



Performance:

- Accuracy Class: as defined in IEC 60044-2 Part 2, Voltage Transformers.
- Excitation Current: ≤ 0.5 mA
- Secondary burden resistance: 100 kOhm

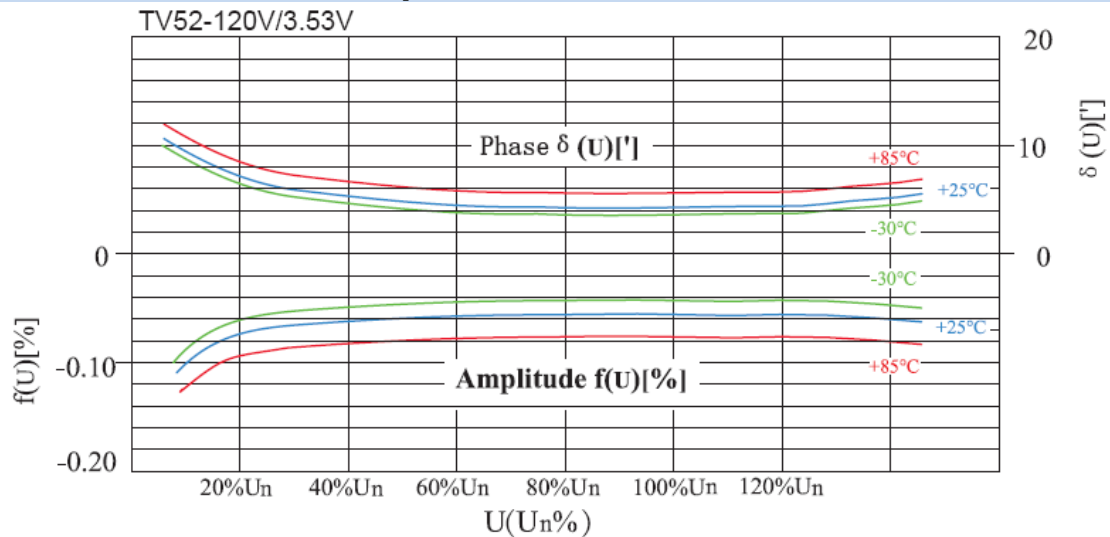
Options:

- 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.

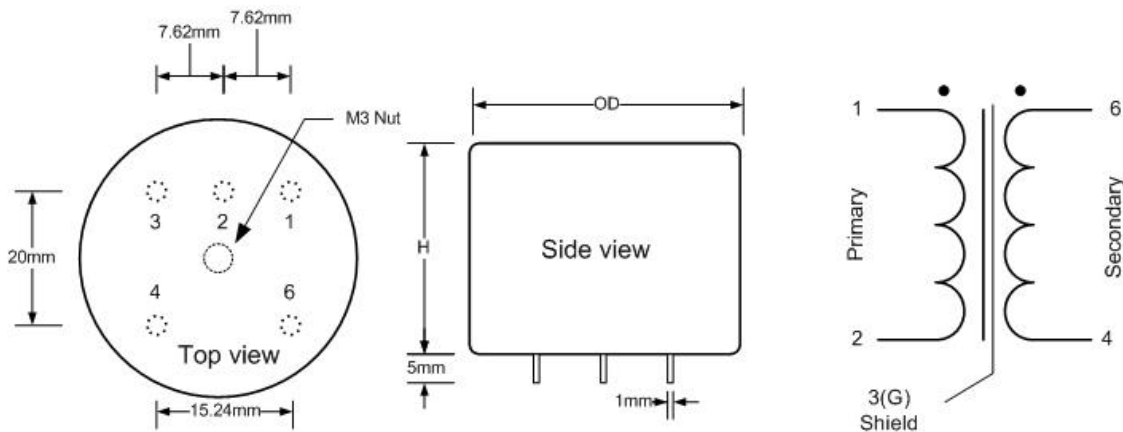
Performance

Part Number	Rated Voltage	Accuracy Class	Phase Error at rated Voltage	Linearity
TV5202	Input : 57.7V, 100V, 120V,200V Output : 100mV--7.07V(Optional)	0.1	$\leq 20'$	5% to 120% of Rated Voltage
TV5402	Input : 150V, 200V, 220V, 300V, Output : 100mV--7.07V(Optional)	0.1	$\leq 20'$	5% to 120% of Rated Voltage

Typical Performance – Amplitude & Phase Shift Error:



Outline Drawing:



Outline Dimensions:

Part Number	Outside Diameter (OD mm)	Height (H mm)
TV5202	32.0mm/ (1.259")	26.0mm/ (1.024")
TV5402	37.4mm/ (1.472)	28.0mm/ (1.102")

Notes:**TV5202 Packaging:**

Carton -355mm (14.0") x 243mm (9.6") x 45mm (1.8"), **60 pcs** per carton
Bulk pack carton - 360mm (14.2") x 250mm (9.8") x 265mm (10.4")
300 pcs per bulk pack

TV5402 Packaging:

Carton -355mm (14.0") x 243mm (9.6") x 45mm (1.8"), **60 pcs** per carton
Bulk pack carton - 360mm (14.2") x 250mm (9.8") x 265mm (10.4")
300 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.