

## Toroidal, PCB Mounted Voltage Transformer

The **TV6301** Series of toroidal, PCB mounted voltage transformer is designed for application where an AC current signal must be transformed into lower AC voltage signal appropriate for micro-processor based circuits.



The TV6301 series are designed specifically for integration into products which require exceptionally accurate signal transformation with low phase shift while exposed to harsh environmental operating conditions.

### Features:

**Primary:** 300, 380, 500, or 600 VAC

**Secondary:** Options: 100mV to 7.07 V @ rated voltage

- Construction:
  - Exterior Material: PBT Resin, UL 94 V-0
  - Interior Insulation: Epoxy resin
- RoHS compliant



### Specifications:

- Frequency: 50 to 400 Hz
- Dielectric Resistance: 1,000 Mohms @ 500 VDC
- Isolation Voltage: 2500 Vrms for 1 minute @ 0.5 mA.
- Surge withstand potential: 5000V (1.2/50μ second standard shock wave)
- Operating Temperature: -25°C to +55°C  
Optional: -40°C to +85°C

### Performance:

- Accuracy Class: 0.1L (IEC 60044-2 Part 2 Voltage Transformers Class 0.1)
- Linearity: 5% to 120% of Rated Voltage
- Voltage error @ Rated Voltage:  $\leq \pm 0.1\%$
- Phase shift @ Rated Voltage:  $\leq 5'$
- Excitation Current:  $\leq 0.5$  mA
- Secondary burden resistance: 100 kOhm

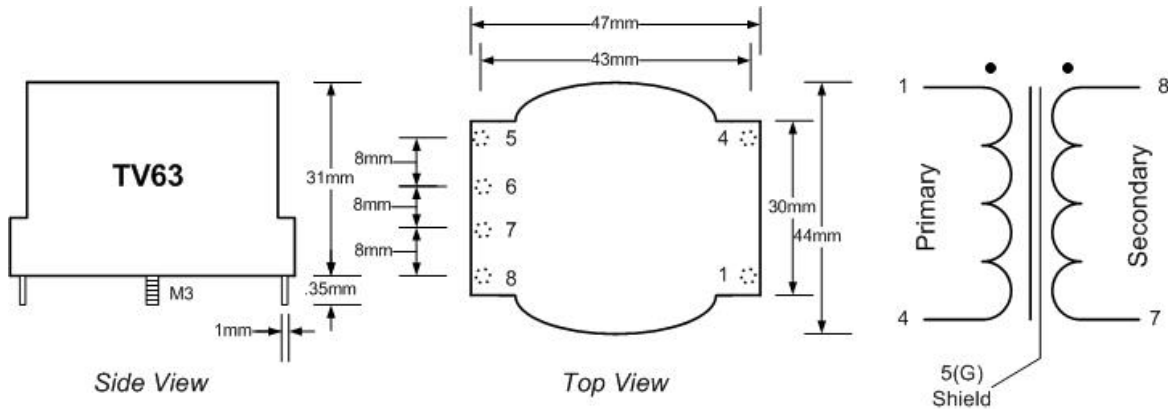
### Performance (Primary = 347VAC FS, $R_{Load} \geq 100$ kOhm)

Primary Voltage (% FS)	5%	20%	50%	80%	100%	120%
Ratio Error (%)	-0.038	-0.026	-0.012	-0.001	0.001	0.004
Phase Shift Error (minutes)	9.5	5.9	3.9	3.4	3.2	2.8

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**Outline Drawing:**



**NOTE:** The TV6301 Series of PCB mounted voltage transformers are bulk packed. Purchase order quantities should be in increments of the bulk packaging quantities:

**TV6301** – 35 pc increments, 105 pcs per bulk pack  
(Bulk pack box = 0.015CBM, 19.4kg)

**Custom toroidal voltage transformer designs** are available to meet the specific application requirements. For a no obligation technical evaluation, please provide the specific performance requirements to [engineering@tichenassociates.com](mailto:engineering@tichenassociates.com) or the address below.

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