TV1013 Series
Microminiature Precision AC Voltage Transformers

1. Features:
① Miniature size, high precision; being able to be directly soldered on PCB, easy to use and elegant outline;
② Fully-encapsulated, strong mechanical and environmental endurance, strong dielectric strength, safe and reliable

2. Ambient Conditions
① Ambient temperature: -55℃~+85℃;
② Relative humidity: ≤90% at 40℃;
③ Atmospheric pressure: 860~1060mbar(about 650~800mmHg);

3. Range of working frequency: 20Hz~20kHz;

4. Insulation Rating: Class F (155℃)

5. Safety Features:
① Dielectric resistance: >1000MΩ in normal condition;
② Insulation withstand voltages: 2000V 50Hz/1min;
③ Fire retardancy: In conformity with UL94-V0.

6. Outline Drawing, Installation Dimension and Coil Diagram

7. Typical usages and technical parameters
TV1013 is actually a current-type voltage transformer. There are two typical usages shown in Fig.1 and Fig.2, respectively. The parameters are listed in Table 1.

www.bingzi.com
Table 1:

<table>
<thead>
<tr>
<th>Usage</th>
<th>Model</th>
<th>Input Voltage</th>
<th>Output Voltage</th>
<th>Phase Shift</th>
<th>Non Linearity</th>
<th>Linear Range</th>
<th>Rated Current</th>
<th>Withstand Voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Used as in Fig.1</td>
<td>TV1013-1</td>
<td>≤1000Vac</td>
<td>≤0.5Vac</td>
<td>≤30°</td>
<td>≤0.2%</td>
<td>1.5 times of the rated value</td>
<td>2mA/2mA</td>
<td>≥2000V</td>
</tr>
<tr>
<td></td>
<td>TV1013-1M</td>
<td></td>
<td>≤0.625Vac</td>
<td>≤40°</td>
<td>≤0.25%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Used as in Fig.2</td>
<td>TV1013-1</td>
<td>≤1000Vac</td>
<td>≤1/2 IC’s power supply</td>
<td>≤5°</td>
<td>≤0.1%</td>
<td>2 times of the rated value</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TV1013-1M</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8. **Attention:**

This model of voltage transformer is a current-type transformer. Therefore the secondary circuit is disallowed to be an open circuit. By virtue of this reason, DO NOT connect any fuse in the secondary loop.