Current Sense Transformers – T6522-AL

This low cost transformer is designed for up to 300 kHz and above to sense continuous currents up to 3 Amps. The current windings can be connected in series to provide twice the output sensitivity. It offers 500 Vrms interwinding isolation.

The small footprint, low profile, surface mount ceramic case makes it ideal for high-density boards and provides an excellent surface for pick and place operations.

Applications include power supply feedback control, motor protection, overload sensing and detecting load drop or shutdown.

To request free evaluation samples, contact Coilcraft or visit www.coilcraft.com.

<table>
<thead>
<tr>
<th>Part number1</th>
<th>Turns (N)2</th>
<th>Inductance3</th>
<th>DCR max (Ohms)</th>
<th>Frequency range4 (kHz)</th>
<th>Sensed current (A) max Iin</th>
<th>Volt-time product5 (V-µsec)</th>
<th>R7 (Ohms) for 1 Vout from 1 A Iin6</th>
</tr>
</thead>
<tbody>
<tr>
<td>T6522-AL</td>
<td>1:50</td>
<td>3.4</td>
<td>0.006</td>
<td>0.70</td>
<td>50 – &gt;300</td>
<td>3</td>
<td>30</td>
</tr>
</tbody>
</table>

1. When ordering, please specify packaging code:
   - T6522-ALD
   - Packaging: D = 13” machine ready reel. EIA-481 embossed plastic tape (750 per full reel). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer ($25 charge).
   - B = Less than full reel. In an effort to simplify our part numbering system, Coilcraft is eliminating the need for multiple packaging codes. When ordering, simply change the last letter of your part number from B to D.

2. The two primary windings may be connected in parallel (1:50) to provide up to 3 A (Iin) sensing capability (3 Vout), or connected in series (2:50) to provide twice the sensitivity (1 A Iin yields 2 Vout).

3. Inductance is for the secondary, measured at 100 kHz, 0.1 Vrms.

4. For specific questions regarding frequency range, please contact us at cst@coilcraft.com.

5. Maximum volt-time product for the secondary.

6. Varying terminating resistance increases or decreases output Voltage/Ampere according to the following equation:
   \[ R_T = \frac{V_{out} \times N_{sec}}{I_{in}} \]

7. Electrical specifications at 25°C.

Typical Application

![Typical Application Diagram]

<table>
<thead>
<tr>
<th>Iin</th>
<th>1</th>
<th>T</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>2</td>
</tr>
</tbody>
</table>

Typical Response (with R7 = 50 Ohm)

![Typical Response Graph]

<table>
<thead>
<tr>
<th>Current (Amps rms)</th>
<th>0</th>
<th>0.5</th>
<th>1.0</th>
<th>1.5</th>
<th>2.0</th>
<th>2.5</th>
<th>3.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vout (Volts rms)</td>
<td>0</td>
<td>0.5</td>
<td>1.0</td>
<td>1.5</td>
<td>2.0</td>
<td>2.5</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Series

Parallel

© Coilcraft Inc. 2021
This product may not be used in medical or high risk applications without prior Coilcraft approval. Specification subject to change without notice. Please check web site for latest information.
Current Sense Transformers – T6522-AL

Typical Response (with R_T = 50 Ohm)

Dimensions

Recommended Land Pattern

Weight: 0.9 g
Termination Tin-silver-copper over silver-palladium-platinum
Ambient temperature –40°C to +85°C
Storage temperature Component: –40°C to +185°C.
Tape and reel packaging: –40°C to +80°C
Packaging 750/13” reel Plastic tape: 24 mm wide, 0.37 mm thick,
12 mm pocket spacing, 6.5 mm pocket depth.