# SMT Current Sensor – T6522-AL

This low cost transformer is designed for use at 50 kHz to 300 kHz 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](http://www.coilcraft.com).

<table>
<thead>
<tr>
<th>Part number¹</th>
<th>Turns (N)²</th>
<th>Inductance³ (mH)</th>
<th>DCR max (Ohms)</th>
<th>Frequency range (kHz)</th>
<th>Sensed current max Iₙ</th>
<th>Volt-time product (V-µsec)</th>
<th>Rₜ for 1 Vₜₜ from 1 A Iₙ²</th>
</tr>
</thead>
<tbody>
<tr>
<td>T6522-ALD</td>
<td>1:50</td>
<td>3.4</td>
<td>0.006</td>
<td>50 – 300</td>
<td>3 A</td>
<td>30</td>
<td>50 Ohms</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).
   - B = Less than full reel. In tape, but not machine ready. To have a leader and trailer added ($25 charge), use code letter D instead.

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

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


5. Varying terminating resistance increases or decreases output Voltage/Ampere according to the following equation:

   \[ Rₜ = Vₜₜ × Nₘₜₜ/ Iₙ \]

6. Electrical specifications at 25°C.

## Typical Application

![Typical Application Diagram](image)

### Typical Response (with Rₜ = 50 Ohm)

![Typical Response Graph](image)
SMT Current Sensor – T6522-AL

Dimensions

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.