Features

- Compliant with IEEE802.3 standards
- Designed for 10/100 Base-Tx and PoE
- RoHS compliant*

This series is currently available but not recommended for new designs. The newer model SM13126PEL is recommended.

SM51108PEL LAN 10/100 Base-Tx VoIP Transformer (PoE) Modules

Electrical Specifications @ 25 °C

- **Turns Ratio (±3 %)**: 1CT:1CT
- **OCL (@100 kHz, 0.1 V)**: 350 µH min.
- **Leakage Inductance (@100 kHz, 0.1 V)**: 35 pF max.
- **DCR**:
  - 1-3 = 0.8 ohm max.
  - 9-11 = 1.1 ohm max.
- **Insertion Loss**: 1-100 MHz: -1.2 dB max.
- **Return Loss (@ 100 Ohms)**:
  - 1-30 MHz: -16 dB min.
  - 40 MHz: -14 dB min.
  - 50 MHz: -13 dB min.
  - 60-80 MHz: -12 dB min.
- **Cross Talk**:
  - 60 MHz: -40 dB min.
  - 100 MHz: -35 dB min.
- **DCMRR**:
  - 30 MHz: -43 dB min.
  - 60 MHz: -37 dB min.
  - 100 MHz: -33 dB min.
- **PoE Current**: Up to 350 mA
- **Hi-Pot Test**: 1500 Vrms
- **Operating Temperature Range**: -40 °C to +85 °C
- **Storage Temperature Range**: -25 °C to +125 °C

Environmental Specifications

- **Moisture Sensitivity Level**: 1
- **ESD Classification (HBM)**: N/A

Packaging Specifications

- **Tape & Reel**: 600 pcs./reel

How To Order

<table>
<thead>
<tr>
<th>Model</th>
<th>SM51108 P E L</th>
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<tr>
<td>Construction</td>
<td>P = Potted</td>
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<tr>
<td>Packaging</td>
<td>E = Tape and Reel (600 pcs./reel)</td>
</tr>
<tr>
<td>Termination</td>
<td>L = Tin (RoHS Compliant)</td>
</tr>
</tbody>
</table>

Electrical Schematic

**WARNING** Cancer and Reproductive Harm - www.P65Warnings.ca.gov

*RoHS Directive 2015/863, Mar 31, 2015 and Annex. Specifications are subject to change without notice. Users should verify actual device performance in their specific applications. The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at www.bourns.com/docs/legal/disclaimer.pdf.
Soldering Profile

- Ramp-up rate = 3 °C/sec. max.
- Ramp-down rate = 6 °C/sec. max.
- $T_L = 217 \, ^\circ C$
- $t_L = 60-150 \, $sec.
- $T_P = 250 \pm 3 \, ^\circ C$
- Time within 5 °C of actual Peak Temp ($t_p$)2 = 20–40 sec.
- $T_S \, \text{min} = 150 \, ^\circ C$
- $T_S \, \text{max} = 200 \, ^\circ C$
- $T_S \, \text{min} \, \text{to} \, T_S \, \text{max} = 60-180 \, \text{sec.}, 25 \, ^\circ C \, \text{to Peak Temperature} = 8 \, \text{min. max.}$

Refer to IPC/JEDEC J-STD020D standard.

Packaging Specifications

<table>
<thead>
<tr>
<th>Temperature</th>
<th>Time at 5 °C of Actual Peak Temp ($t_p$)</th>
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<tbody>
<tr>
<td>25 °C</td>
<td>1.75 °C to Peak</td>
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Refer to IPC/JEDEC J-STD020D standard for more details.

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