SMT Current Sense Transformer  SCS Series

- Sensed current up to 30 A
- Designed for up to 1 MHz and above
- 500 Vrms, one minute isolation (hipot) between windings.

Core material  Ferrite
Terminations  RoHS compliant matte tin over nickel over phos bronze
Weight  3.4 – 3.7 g
Ambient temperature  –40°C to +125°C
Storage temperature  Component: –40°C to +125°C.
Tape and reel packaging: –40°C to +80°C
Resistance to soldering heat  Max three 40 second reflows at +260°C, parts cooled to room temperature between cycles
Moisture Sensitivity Level (MSL)  1 (unlimited floor life at <30°C / 85% relative humidity)
Packaging  200/13” reel  Plastic tape: 32 mm wide, 0.5 mm thick, 24 mm pocket spacing, 3.0 mm pocket depth
PCB washing  Tested with pure water or alcohol only. For other solvents, see Doc787_PCB_Washing.pdf

<table>
<thead>
<tr>
<th>Part number</th>
<th>Turns (N)</th>
<th>Inductance (mH)</th>
<th>DCR max (Ohms)</th>
<th>Frequency range (kHz)</th>
<th>Volt-time product (Vµsec)</th>
<th>Sensed current Iin (A)</th>
<th>Terminating resistance RT (Ohms)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCS-050L_</td>
<td>1:50</td>
<td>3.8</td>
<td>0.0024 0.90</td>
<td>6 – 1000</td>
<td>80</td>
<td>30</td>
<td>1.7</td>
</tr>
<tr>
<td>SCS-100L_</td>
<td>1:100</td>
<td>14.8</td>
<td>0.0024 1.80</td>
<td>3 – 1000</td>
<td>160</td>
<td>30</td>
<td>3.3</td>
</tr>
<tr>
<td>SCS-200L_</td>
<td>1:200</td>
<td>59.2</td>
<td>0.0024 3.90</td>
<td>2 – 1000</td>
<td>320</td>
<td>30</td>
<td>6.7</td>
</tr>
</tbody>
</table>

1. When ordering, please specify packaging code:

   SCS-200LD

   Packaging: D = 13” machine-ready reel. EIA-481 embossed plastic tape (200 parts 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. Inductance measured between secondary pins at 10 kHz, 0.06 Vrms, 0 Adc.
3. Primary DCR is measured with the windings connected in parallel.
4. For specific questions regarding frequency range, please contact us at cst@coilcraft.com.
5. Maximum volt-time product is for the secondary, based on 2000 Gauss.
6. Primary current of 30 A causes less than 25°C temperature rise from 25°C ambient. Higher current causes a greater temperature rise (see Temperature Rise vs Current curve).
7. Terminating resistance (RT) value is based on 1 Volt output with 30 Amps flowing through the primary. Varying terminating resistance increases or decreases output Voltage/Ampere according to the following equation:

   \[ R_T = \frac{V_{out} \times N_{sec}}{I_{in}} \]

8. Electrical specifications at 25°C.

   Refer to Doc 362 “Soldering Surface Mount Components” before soldering.

Typical Circuit
SCS Series Current Sense Transformers

Temperature Rise vs Current

Dimensions

Recommended Land Pattern

Dimensions are in inches

- Temperature rise vs current graph
- Diagram of transformer with internal code and dimensions
- Recommended land pattern

Note: Primary windings to be connected in parallel on the PC board

Specifications subject to change without notice. Please check website for latest information.