Current Sense Transformers CST1211

- Designed for use from 1.18 kHz to 1 MHz to sense continuous currents to 28 Amps
- AEC-Q200 Grade 1 (−40°C to +125°C)
- 3000 Vrms, one minute isolation (hipot) between windings
- 3.6 mm creepage and clearance
- UL Class 180 (H) insulating materials

Core material: Ferrite
Environmental: RoHS compliant
Terminations: Tin-silver-copper over tin over nickel over copper
Weight: 2.6 g
Ambient temperature: −40°C to +125°C
Maximum part temperature: +165°C (ambient + temp rise)
Storage temperature: Component: −40°C to +165°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)
Failures in Time (FIT) / Mean Time Between Failures (MTBF): 10.06 per billion hours / 9.940E+07 hours, calculated per Telcordia SR-332
Packaging: 350/13″ reel; Plastic tape: 24 mm wide, 0.5 mm thick, 16 mm pocket spacing, 11.6 mm pocket depth

### Specifications

<table>
<thead>
<tr>
<th>Part number</th>
<th>Turns (N) pri : sec</th>
<th>Inductance (mH) pri</th>
<th>DCR max (Ohms) pri</th>
<th>Frequency range (kHz)</th>
<th>Volt-time product (Vμsec)</th>
<th>Sensed current Imax (A)</th>
<th>Terminating resistance Rtt (Ohms)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CST1211-050LD</td>
<td>1 : 50</td>
<td>1.7</td>
<td>0.00153</td>
<td>33 – 1000</td>
<td>106.0</td>
<td>28</td>
<td>1.8</td>
</tr>
<tr>
<td>CST1211-070LD</td>
<td>1 : 70</td>
<td>3.0</td>
<td>0.00153</td>
<td>24 – 1000</td>
<td>148.4</td>
<td>28</td>
<td>2.5</td>
</tr>
<tr>
<td>CST1211-100LD</td>
<td>1 : 100</td>
<td>7.0</td>
<td>0.00153</td>
<td>17 – 1000</td>
<td>212.0</td>
<td>28</td>
<td>3.6</td>
</tr>
<tr>
<td>CST1211-125LD</td>
<td>1 : 125</td>
<td>11.0</td>
<td>0.00153</td>
<td>13 – 1000</td>
<td>265.0</td>
<td>28</td>
<td>4.5</td>
</tr>
<tr>
<td>CST1211-200LD</td>
<td>1 : 200</td>
<td>32.0</td>
<td>0.00153</td>
<td>11 – 1000</td>
<td>424.0</td>
<td>28</td>
<td>7.1</td>
</tr>
</tbody>
</table>

1. **Packaging:** D = 13″ machine-ready reel. EIA-481 embossed plastic tape (350 parts per full reel). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer ($25 charge).
2. Inductance measured between secondary pins at 100 kHz, 0.1 Vrms, 0 Adc.
3. Volt-time product is for the secondary, between pin 4 and 5.
4. Primary current of 28 A causes less than 40°C temperature rise from 25°C ambient. Higher current causes a greater temperature rise (see Temperature Rise vs Current curve).
5. Terminating resistance (Rtt) value is based on 1 Volt output with 28 Amps flowing through the primary. Varying terminating resistance increases or decreases output Voltage/Ampere according to the following equation: $R_{tt} = \frac{V_{out} \times N_{sec}}{I_{in}}$.
6. Electrical specifications at 25°C.

For more information, refer to Doc 362 “Soldering Surface Mount Components” before soldering.
CST1211 Series SMT Current Sense Transformers

Temperature Rise vs Current

![Temperature Rise vs Current Graph](image)

- **Dot indicates pin 1**
- **Internal code**
- **Recommended Land Pattern**

Dimensions are in **inches**

- **10**
- **12.5**: 0.417
- **11**: 0.433
- **12.2**: 0.48
- **2.6**: 0.102
- **5.9**: 0.232
- **1.25**: 0.049
- **2.5**: 0.098
- **4.2**: 0.165
- **4.5**: 0.184
- **5.9**: 0.232
- **7.25**: 0.049

Parts shown are preproduction products available for evaluation only.

**Technical Specifications**

- **Temperature Rise vs Current**
- **Dimensions in inches**
- **Recommended Land Pattern**

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