HCTSM150102HL High Clearance and Creepage Distance Transformer

Features
- Toroid core for high coupling and low radiation
- Complies with IEC/UL 60664-1 and IEC/UL 62368-1
- Reinforced insulation for working voltage up to 1500 VDC
- Hi-Pot: 7640 VDC
- Designed for isolation power supplies using TI SN6501 and SN6505B
- UL recognized per UL 62368-1, File No. E515965
- Partial discharge level up to 2250 V (Ut = 1800 V)
- RoHS compliant*

HCTSM150102HL

Additional Information
Click these links for more information:
- Product Technical Library
- Inventory
- Samples
- Contact

General Specifications
- OCL (100 kHz / 1 V) .......... 80 µH min. Leakage Inductance (100 kHz/0.1 V) ................. 4.0 µH max.
- DCR
  - Pin (1-3) ...................... 0.20 Ω max.
  - Pin (6-4) ........................ 0.35 Ω max.
- Turns Ratio (Pin (6-4) : Pin (1-3)) ........................................... 2.0 ± 3 %
- Rated Current (Parallel input) ........... 1 A
- Volt Second Product ........... 25 VuS typ.
- Partial Discharge Test based on IEC 60664-1
  - 2250 Vrms (Ut = 1800 Vrms)
  - Hi-pot (1 mA, 2 S) ........... 7640 VDC
  - Working Voltage .......... up to 1500 VDC
  - Operating Temperature
    - -40 °C to +125 °C (Temperature rise included)
  - Storage Temperature (Component) .................. -40 °C to +125 °C
- Clearance/Creepage Distance of
  - Primary to Secondary ....... 15 mm min.
  - Level of Insulation
  - Reinforced for the working voltage of 1500 VDC, Overvoltage Category II,
  - Pollution Degree 2, Altitude 2000 m
  - Moisture Sensitivity Level ............... 1
  - ESD Classification (HBM) ............. N/A

Packaging Specifications
- Tape & Reel .......... 200 pcs./13-inch reel

Specifications are subject to change without notice.
Users should verify actual device performance in their specific applications.
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WARNING Cancer and Reproductive Harm - www.P65Warnings.ca.gov


Recommended Layout

How To Order

HCTSM150102H L - E

Model
RoHS Compliancy Designator
Packaging
E = 200 pcs. per 13-inch Reel, 3 Reels per Box

Electrical Schematic

Primary
Secondary
Reflow Solder Profile

<table>
<thead>
<tr>
<th>Profile Feature</th>
<th>Pb-Free Assembly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Ramp-Up Rate</td>
<td>3 °C / second max.</td>
</tr>
<tr>
<td>PREHEAT:</td>
<td></td>
</tr>
<tr>
<td>Temperature Min. (T_{smin})</td>
<td>150 °C</td>
</tr>
<tr>
<td>Temperature Max. (T_{smax})</td>
<td>200 °C</td>
</tr>
<tr>
<td>Time (T_{smin} to T_{smax})</td>
<td>60–180 seconds</td>
</tr>
<tr>
<td>Liquidus Temperature (T_{L})</td>
<td>217 °C</td>
</tr>
<tr>
<td>Time Above Liquidus Temperature (t_{L})</td>
<td>60–150 seconds</td>
</tr>
<tr>
<td>Peak Temperature (T_{p})</td>
<td>245-250 °C</td>
</tr>
<tr>
<td>Time within 5 °C of Actual Peak Temperature (t_{p})</td>
<td>20–40 seconds</td>
</tr>
<tr>
<td>Ramp-Down Rate from Peak Temperature</td>
<td>6 °C / second max</td>
</tr>
<tr>
<td>Time 25 °C to Peak Temperature (T_{p})</td>
<td>8 minutes max.</td>
</tr>
<tr>
<td>Do Not Exceed</td>
<td>260 °C</td>
</tr>
</tbody>
</table>

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Packaging Specifications

Specifications and tolerances comply with EIA-481 requirements.

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**DETAIL A**

- **4.00** (157)
- **24.00** (945)
- **44.00** (1732)

**DETAILED DIMENSIONS:**

- **END**
  - TRAILER NO COMPONENT
  - 160 (6.299) MIN.

- COMPONENTS
  - 24.00 (945)
  - 44.00 (1732)

- LEADER NO COMPONENT
  - 400 (15.748) MIN.

**User Direction of Feed**

QTY: 200 PCS. PER REEL

**Dimensions:**

<table>
<thead>
<tr>
<th>MM</th>
<th>INCHES</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.00</td>
<td>0.157</td>
</tr>
<tr>
<td>24.00</td>
<td>0.945</td>
</tr>
<tr>
<td>44.00</td>
<td>1.732</td>
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</tbody>
</table>

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