



## 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 VAC
- 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 High Clearance and Creepage Distance Transformer

### Additional Information

Click these links for more information:



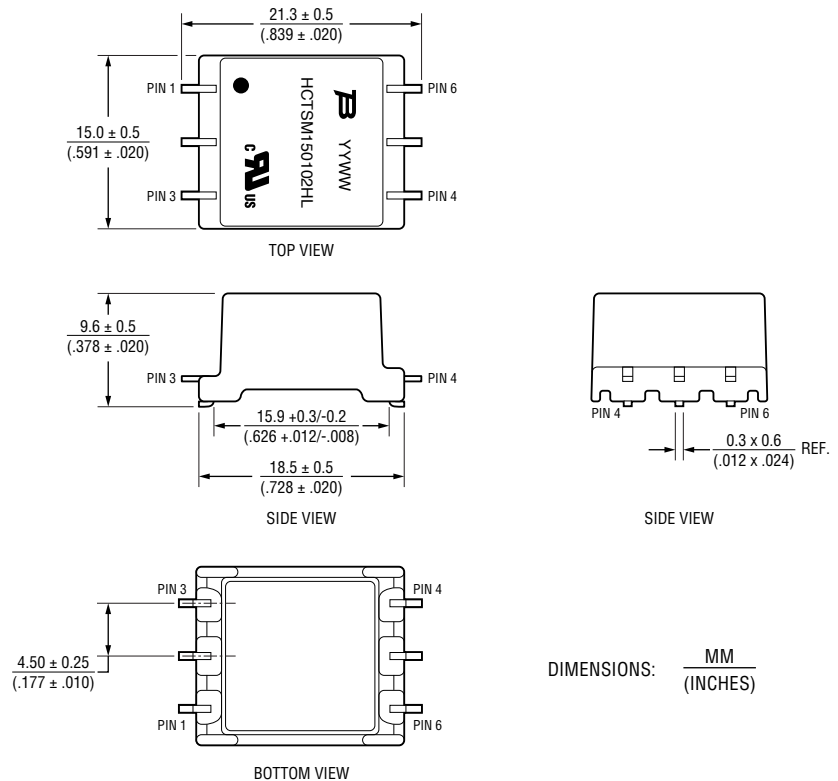
### General Specifications

OCL (100 kHz / 1 V)..... 80  $\mu$ H min.  
 Leakage Inductance (100 kHz/0.1 V)  
 ..... 4.0  $\mu$ H max.  
 DCR  
 Pin (1-3) ..... 0.20  $\Omega$  max.  
 Pin (6-4) ..... 0.35  $\Omega$  max.  
 Turns Ratio (Pin (6-4) : Pin (1-3))  
 ..... 2.0  $\pm$  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 VAC  
 Working Voltage ..... up to 1500 VDC  
 Operating Temperature  
 ..... -40  $^{\circ}$ C to +125  $^{\circ}$ C  
 (Temperature rise included)  
 Storage Temperature (Component)  
 ..... -40  $^{\circ}$ C to +125  $^{\circ}$ 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

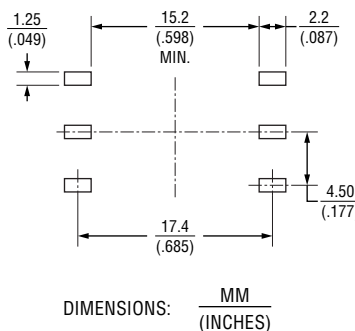
### Packaging Specifications

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

### Product Dimensions



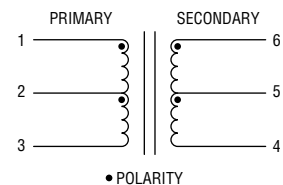
### Recommended Layout



### How To Order

**HCTSM150102H L - E**  
 Model \_\_\_\_\_  
 RoHS Compliancy Designator \_\_\_\_\_  
 Packaging \_\_\_\_\_  
 E = 200 pcs. per 13-inch Reel,  
 5 Reels per Box

### Electrical Schematic



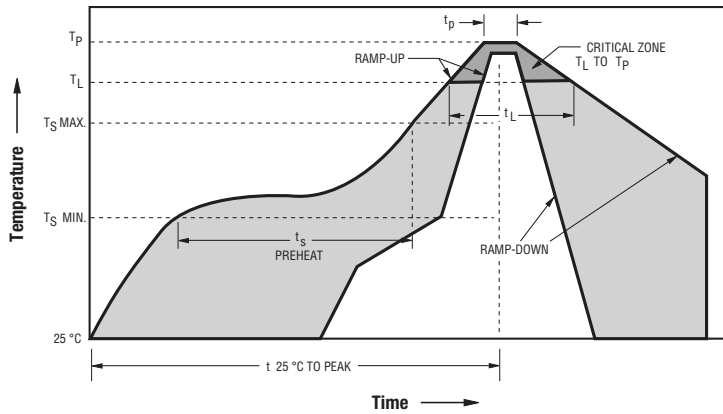
**WARNING Cancer and Reproductive Harm - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)**

\* 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.

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**Reflow Solder Profile**



Profile Feature	Pb-Free Assembly
Average Ramp-Up Rate	3 °C / second max.
PREHEAT: Temperature Min. (T <sub>smin</sub> ) Temperature Max. (T <sub>smax</sub> ) Time (T <sub>smin</sub> to T <sub>smax</sub> )	150 °C 200 °C 60~180 seconds
Liquidus Temperature (T <sub>L</sub> )	217 °C
Time Above Liquidus Temperature (t <sub>L</sub> )	60~150 seconds
Peak Temperature (T <sub>p</sub> )	245-250 °C
Time within 5 °C of Actual Peak Temperature (t <sub>p</sub> )	20~40 seconds
Ramp-Down Rate from Peak Temperature	6 °C / second max
Time 25 °C to Peak Temperature (T <sub>p</sub> )	8 minutes max.
Do Not Exceed	260 °C

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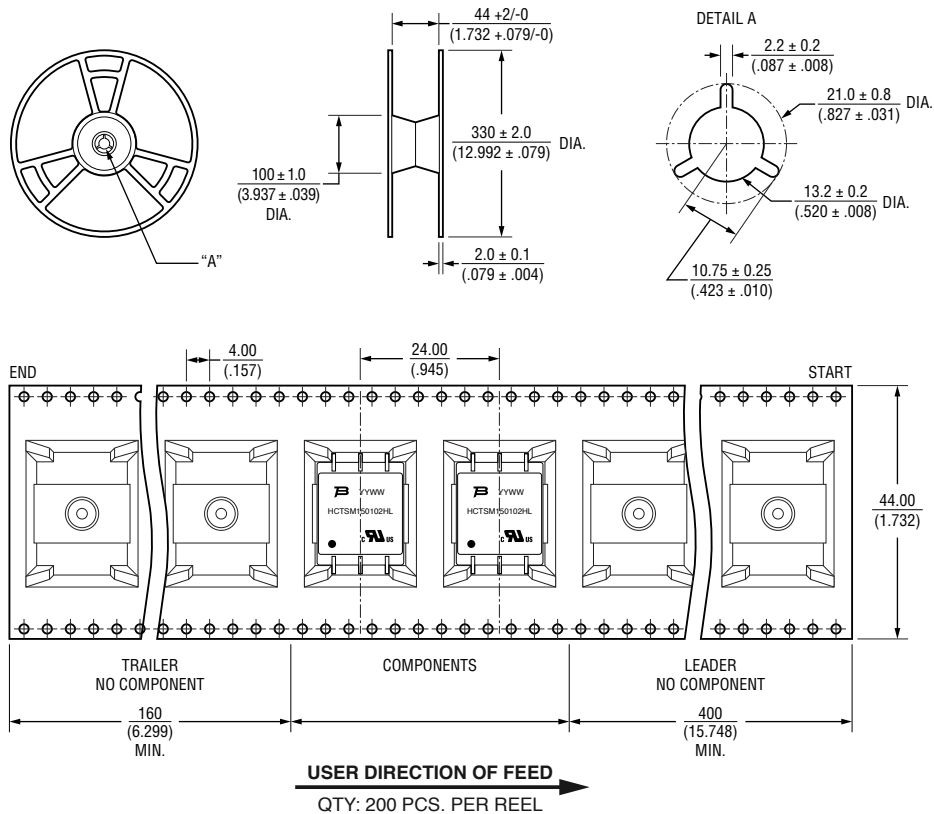
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# HCTSM150102HL High Clearance and Creepage Distance Transformer

**BOURNS®**

## Packaging Specifications

Specifications and tolerances comply with EIA-481 requirements.



DIMENSIONS:  $\frac{\text{MM}}{\text{(INCHES)}}$

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REV. 05/22

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