



## 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 1200 VDC
- Hi-Pot: 5000 VAC
- Fully sealed and compact size
- Designed for isolation power supplies using TI SN6501 and SN6505B
- Partial discharge test based on IEC 60664-1: 2000 V
- AEC-Q200 compliant
- RoHS compliant\*

## HCTSM110103HAL HCT Transformer

### Additional Information

Click these links for more information:



### General Specifications

OCL (100 kHz / 1 V)  
with Pin 2 and Pin 3 tied..... 80  $\mu$ H min.  
Leakage Inductance (100 kHz / 0.1 V)  
..... 6.0  $\mu$ H max.  
DCR  
NP1 ..... 0.18  $\Omega$  max.  
NP2 ..... 0.18  $\Omega$  max.  
NS1 ..... 0.80  $\Omega$  max.  
NS2 ..... 0.80  $\Omega$  max.  
Turns Ratio (NS:NP).....3.0  $\pm$  3 %  
Hi-pot (1 mA, 60 S).....5000 VAC  
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..... 11 mm min.  
Partial discharge test based on  
IEC 60664-1 ..... 2000 V  
Moisture Sensitivity Level..... 1  
ESD Classification (HBM)..... N/A

### Packaging Specifications

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

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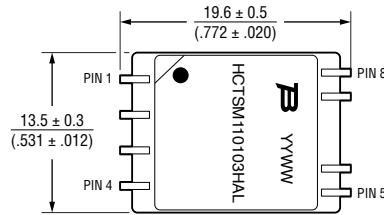
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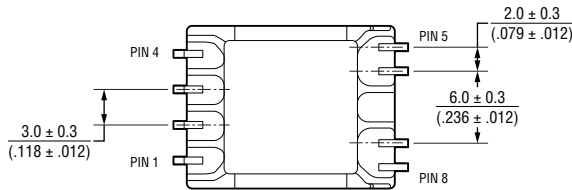
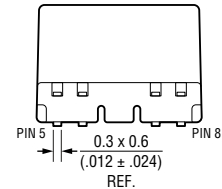
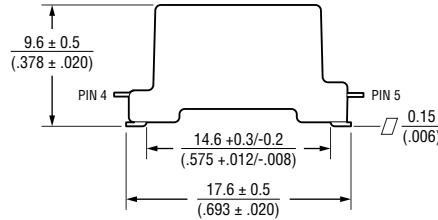
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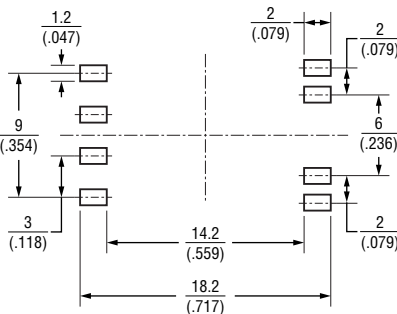
### Product Dimensions



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



### Recommended Layout



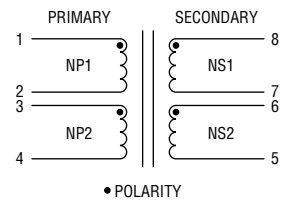
DIMENSIONS:  $\frac{\text{MM}}{\text{(INCHES)}}$

### How To Order

**HCTSM110103H A L - E**

Model \_\_\_\_\_  
AEC-Q200 Compliancy Designator \_\_\_\_\_  
RoHS Compliancy Designator \_\_\_\_\_  
Packaging \_\_\_\_\_  
E = 200 pcs. per 13-inch Reel

### 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.

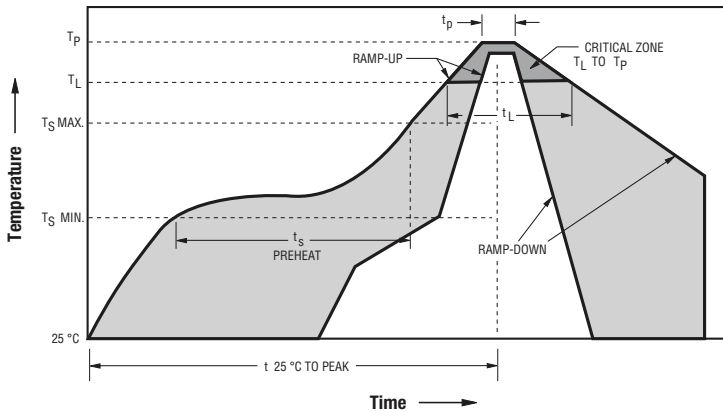
Users should verify actual device performance in their specific applications.

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# HCTSM110103HAL HCT Transformer



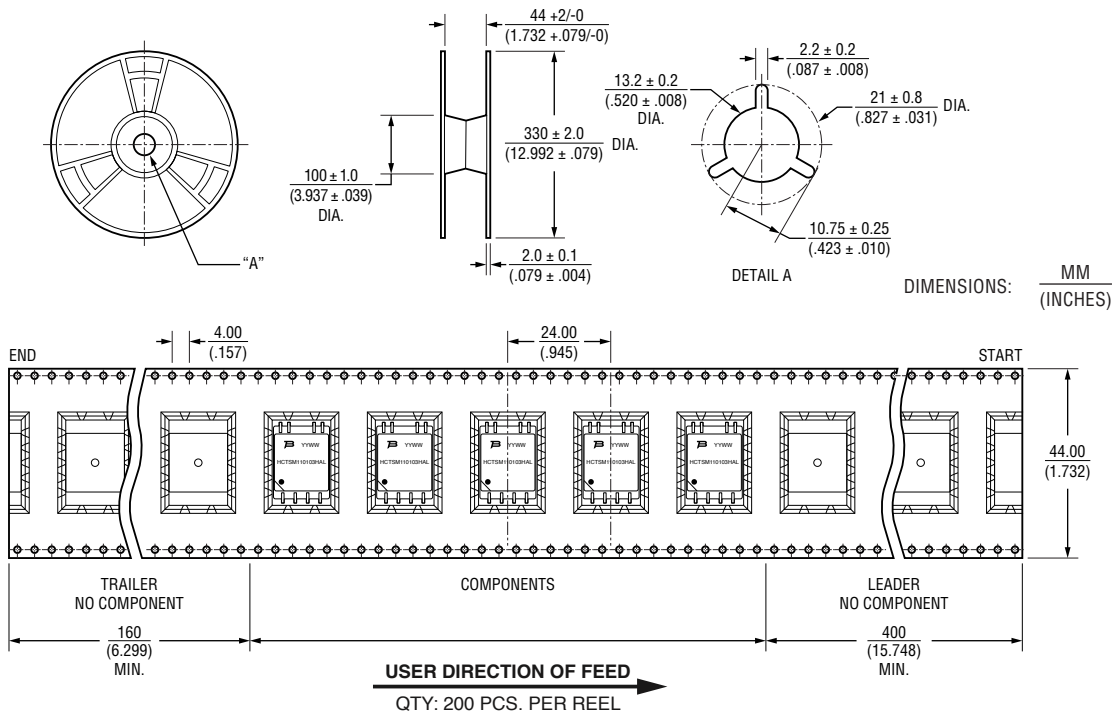
## Reflow Solder Profile



Profile Feature	Pb-Free Assembly
Average Ramp-Up Rate	3 °C / second max.
PREHEAT: Temperature Min. ( $T_{smin}$ ) Temperature Max. ( $T_{smax}$ ) Time ( $T_{smin}$ to $T_{smax}$ )	150 °C 200 °C 60~180 seconds
Liquidus Temperature ( $T_L$ )	217 °C
Time Above Liquidus Temperature ( $t_L$ )	60~150 seconds
Peak Temperature ( $T_P$ )	245-250 °C
Time within 5 °C of Actual Peak Temperature ( $t_p$ )	20~40 seconds
Ramp-Down Rate from Peak Temperature	6 °C / second max.
Time 25 °C to Peak Temperature ( $T_p$ )	8 minutes max.
Do Not Exceed	250 °C

## Packaging Specifications

Specifications and tolerances comply with EIA-481 requirements.



REV. 06/23

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