



Features

- Toroid core for high coupling and low radiation
- Complies with IEC/UL 60950-1 and IEC/UL 62368-1
- Reinforced insulation for working voltage up to 1200 V
- 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 μ H min.

Leakage Inductance (100 kHz / 0.1 V)
..... 6.0 μ H max.

DCR
NP1 0.18 Ω max.
NP2 0.18 Ω max.
NS1 0.80 Ω max.
NS2 0.80 Ω 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)
..... -25 $^{\circ}$ C to +85 $^{\circ}$ 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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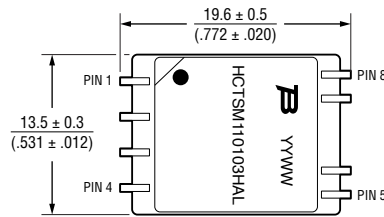
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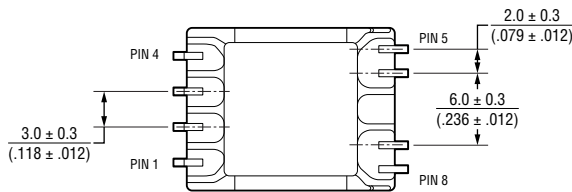
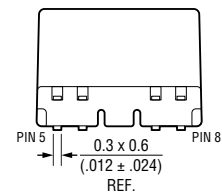
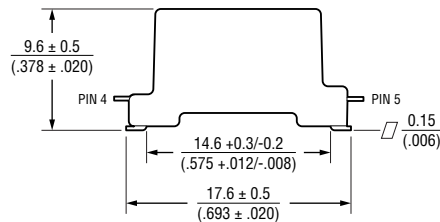
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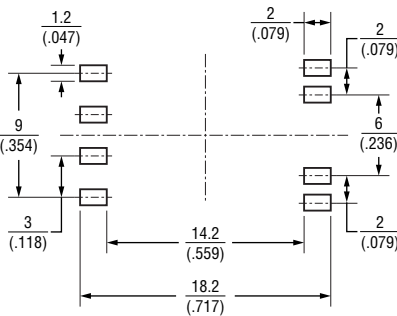
Product Dimensions



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



Recommended Layout



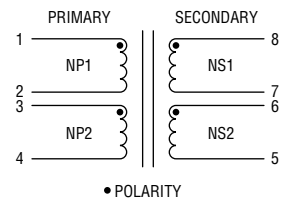
DIMENSIONS: $\frac{\text{MM}}{\text{(INCHES)}}$

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



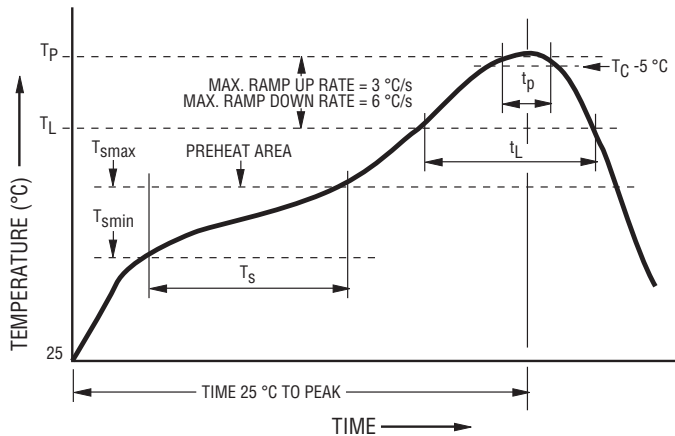
CALIFORNIA WARNING: Can expose you to lead, a carcinogen and reproductive toxicant.
See www.P65Warnings.ca.gov

*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
Preheat / Soak: Temperature Min. (T_{smin}) Temperature Max. (T_{smax}) Time (t_s) from (T_{smin} to T_{smax})	150 °C 200 °C 60~120 seconds
Ramp Up Rate (T_L to T_p)	3 °C / second max.
Liquidous Temperature (T_L) Time (t_L) maintained above T_L	217 °C 60~150 seconds
Peak Package Body Temperature (T_p)	$T_p \leq T_c$ (see table below)
Time (t_p)* within 5 °C of the specified classification temperature (T_c)	< 30 seconds
Ramp Down Rate (T_p to T_L)	6 °C / second max.
Time 25 °C to Peak Temperature	8 minutes max.

Pb-Free Process Classification Temperatures (T_c)

Package Thickness	Volume mm ³ < 350	Volume mm ³ 350 - 2000	Volume mm ³ > 2000
< 1.6 mm	260 °C	260 °C	260 °C
1.6 mm - 2.5 mm	260 °C	250 °C	245 °C
> 2.5 mm	250 °C	245 °C	245 °C

NOTE:

The product has been tested under this reflow condition. Deviations from this, especially higher temperatures for longer duration, could impact performance.

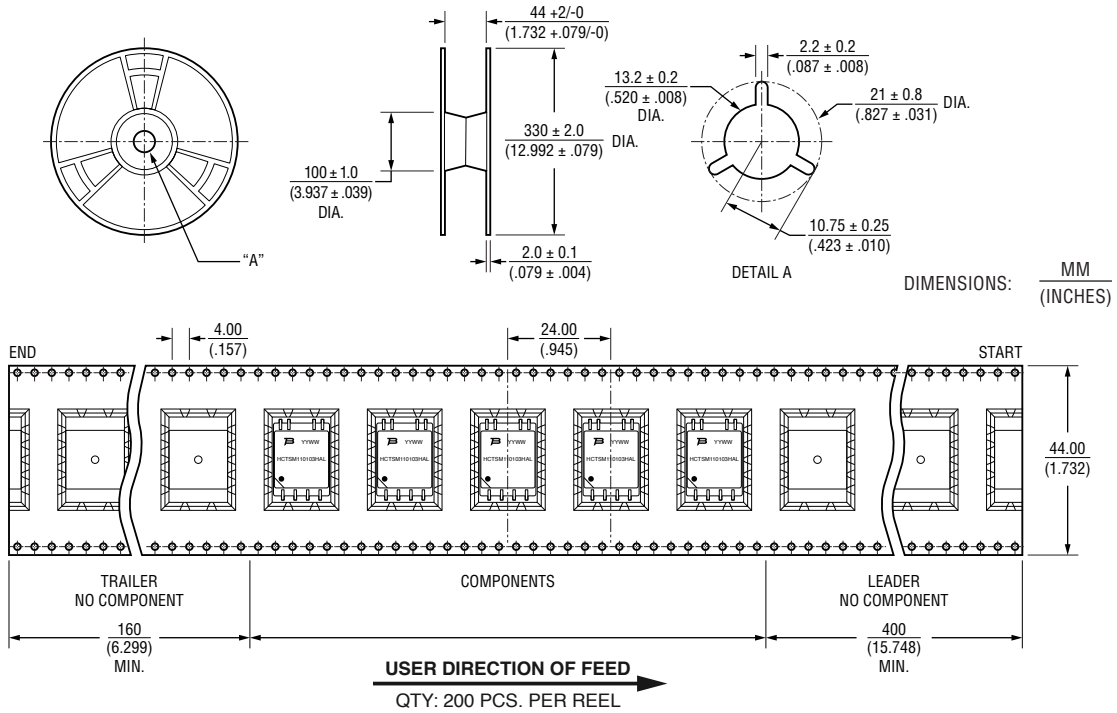
Refer to IPC/JEDEC J-STD-020

HCTSM110103HAL HCT Transformer

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Packaging Specifications

Specifications and tolerances comply with EIA-481 requirements.



REV. 04/26

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