



Features

- Toroid core for high coupling and low radiation
- Complies with IEC 60664-1:2007, IEC62368-1:2018 and UL 62368-1:2021
- Reinforced insulation for working voltage up to 1500 VDC, Material Group I
- Hi-Pot: 7640 VDC
- Designed for isolation power supplies using TI SN6501 and SN6505B
- UL recognized per UL 62368-1:2021, 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:



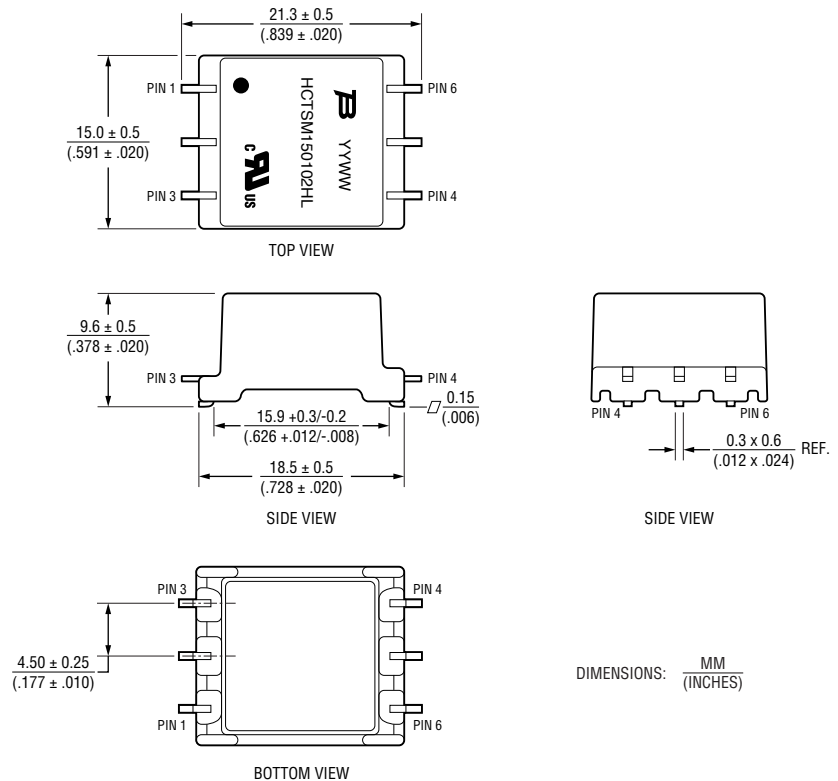
General Specifications

OCL (100 kHz / 1 V).....	80 μ H min.
Leakage Inductance (100 kHz/0.1 V)	4.0 μ H 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 \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 VDC
Working Voltage	up to 1500 VDC
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.....	15 mm min.
Level of Insulation	
.....	Reinforced for a working voltage of 1500 VDC, Material Group I, Overvoltage Category II, Pollution Degree 2, Altitude 2000 m
Moisture Sensitivity Level.....	1
ESD Classification (HBM).....	N/A

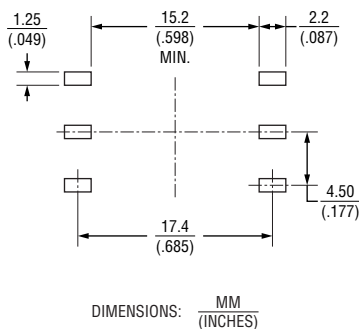
Packaging Specifications

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

Product Dimensions



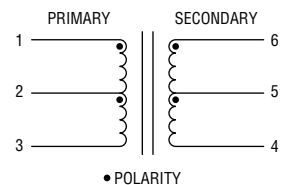
Recommended Layout



How To Order

HCTSM150102H L - E
 Model _____
 RoHS Compliancy Designator _____
 Packaging _____
 E = 200 pcs. per 13-inch Reel,
 3 Reels per Box

Electrical Schematic



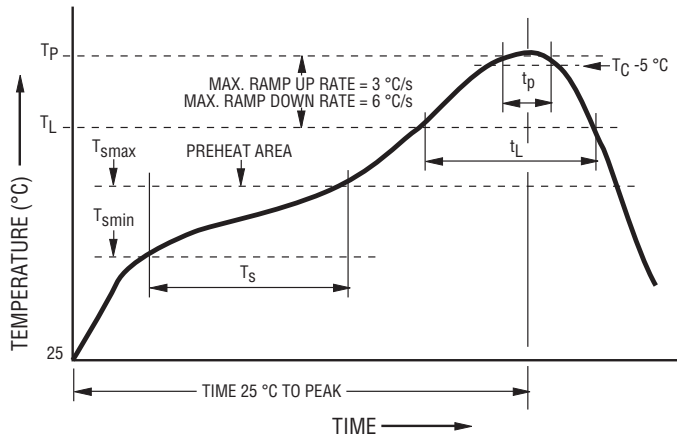
CALIFORNIA WARNING: Can expose you to lead, a carcinogen and reproductive toxicant.
 See www.P65Warnings.ca.gov

*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.

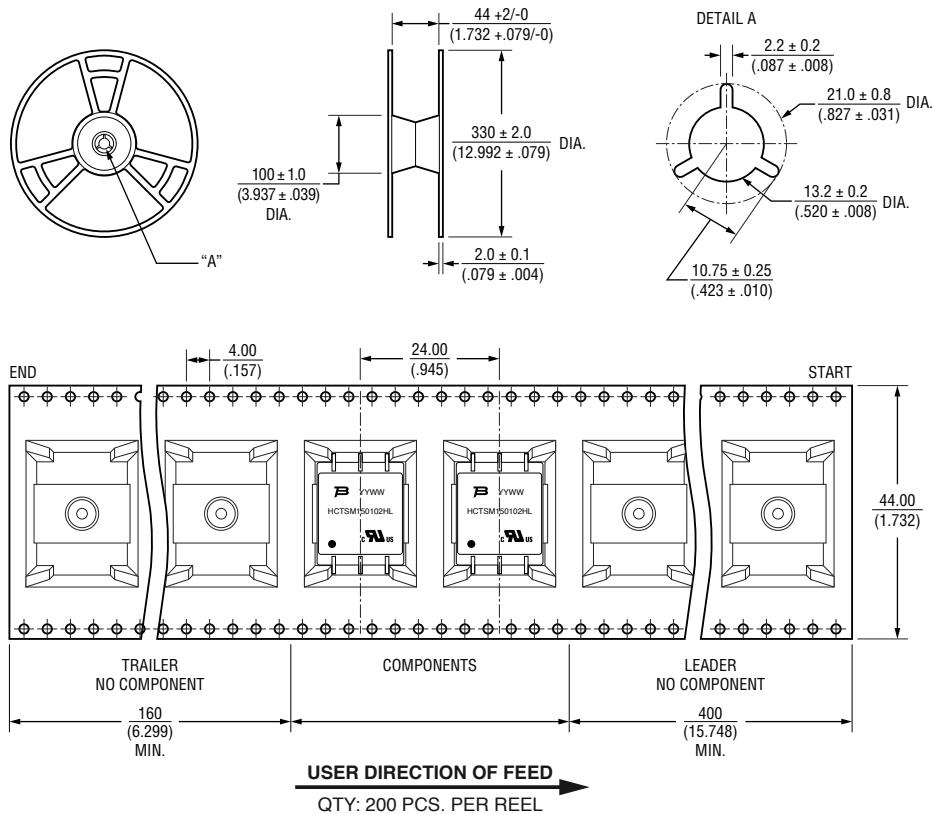
Refer to IPC/JEDEC J-STD-020

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. 04/26

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