



## Features

- Fully automated with overmolding process
- High isolation reliability in a compact size
- Working voltage up to 1000 VDC
- Hi-Pot: 4000 VAC, 1 mA, 60 s
- Design construction: Reinforced insulation between primary and secondary per IEC 60664-1 & IEC 62368-1
- Creepage distance >10.0 mm, pollution degree 2, material group CTI I
- Clearance distance >10.0 mm, overvoltage category II
- AEC-Q200 compliant
- RoHS compliant\*

## SM91872AL BMS Transformer

### Additional Information

Click these links for more information:



### Electrical Specifications @ 25 °C

OCL (100 kHz / 0.1 V) (-40 °C to +125 °C)	150~450 $\mu$ H
Leakage Inductance (100 kHz / 0.1 V)	1.0 $\mu$ H max.
DCR	
Pri. and Sec. Side	0.9 $\Omega$ max.
Turns Ratio	1 : 1 $\pm$ 2 %
Insertion Loss	
4 MHz	-0.25 dB max.
Return Loss (Z out = 100 $\Omega$ )	
4 MHz	-16 dB min.
Hi-Pot (1 mA, 60 S)	4000 VAC
Working Voltage	1000 VDC
Impulse Test	8000 V 1.2/50 $\mu$ s.
Operating Temperature	-40 °C to +125 °C
Storage Temperature (Component)	-25 °C to +85 °C
Moisture Sensitivity Level	1
ESD Classification (HBM)	N/A

### Packaging Specification

Tape & Reel..... 400 pcs. per 13-inch reel

# BOURNS®

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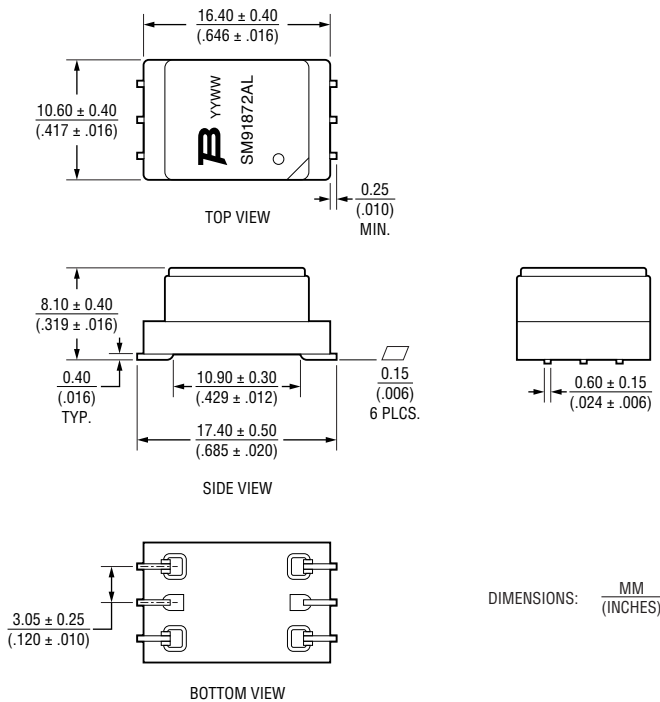
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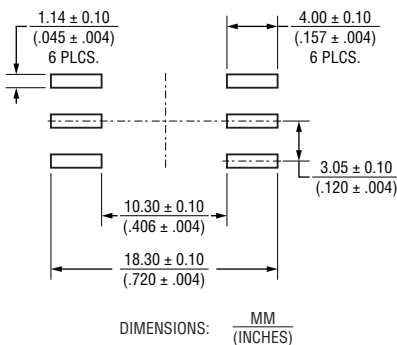
Email: [eurocus@bourns.com](mailto:eurocus@bourns.com)

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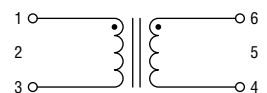
### Product Dimensions



### Recommended Layout



### Electric Schematic



### How To Order

SM91872 A L - E

Model \_\_\_\_\_  
 AEC-Q200 Compliancy Designator \_\_\_\_\_  
 Termination \_\_\_\_\_  
 L = Tin (RoHS Compliant)  
 Packaging \_\_\_\_\_  
 E = 400 pcs. per 13-inch Reel



**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.

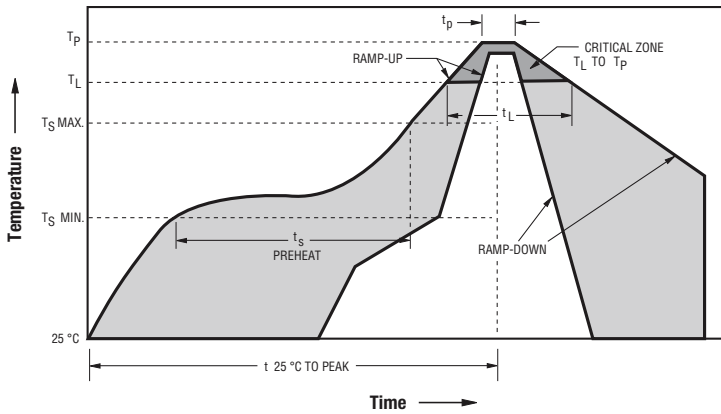
Users should verify actual device performance in their specific applications.

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# SM91872AL BMS Transformer



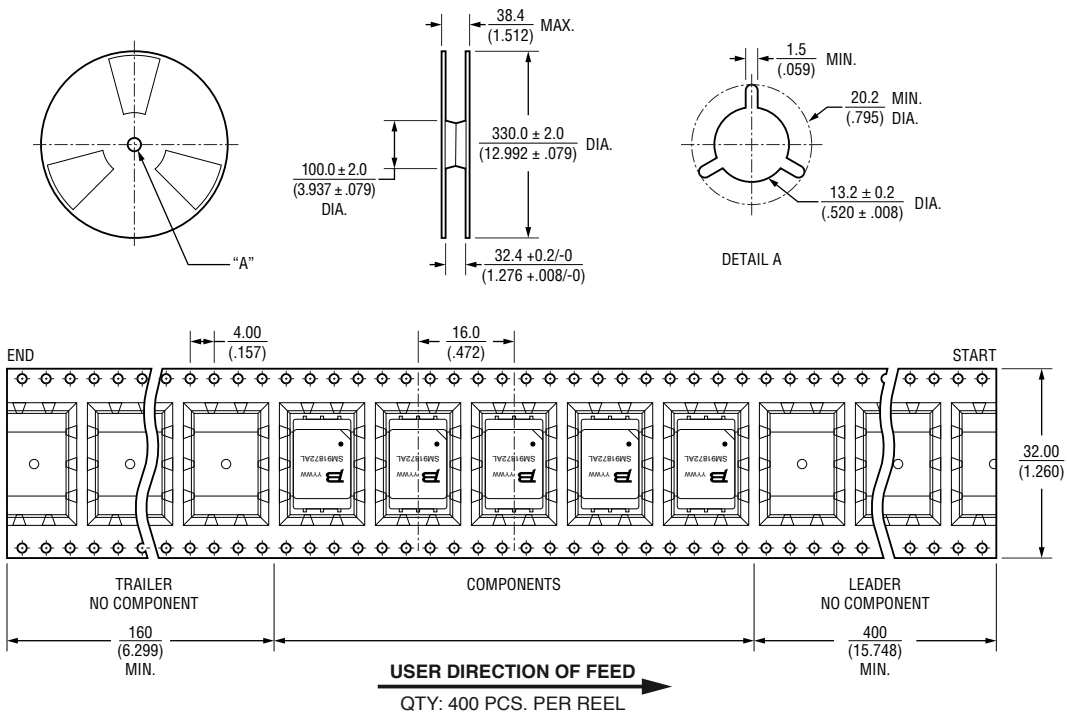
## Solder Profile



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. 08/08/24

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