
## 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:

PRODUCT | TECHNICAL LIBRARY | INVENTORY | SAMPLES | CONTACT

### Electrical Specifications @ 25 °C

OCL (100 kHz / 0.1 V)
(-40 °C to +125 °C)..... 150~450 µH
Leakage Inductance (100 kHz / 0.1 V)
..... 1.0 µH max.
DCR
Pri. and Sec. Side ..... 0.9 Ω max.
Turns Ratio..... 1 : 1 ± 2 %
Insertion Loss
4 MHz..... -0.25 dB max.
Return Loss (Z out = 100 Ω)
4 MHz..... -16 dB min.
Hi-Pot (1 mA, 60 S) .....4000 VAC
Working Voltage ..... 1000 VDC
Impulse Test ..... 8000 V 1.2/50 µs.
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®

**Americas:** Tel: +1 951-781-5500
Email: americus@bourns.com

**Mexico:** Tel: +52-614-478-0400
Email: mexicus@bourns.com

**Asia:** Tel: +886-2-2562-4117
Email: asiacus@bourns.com

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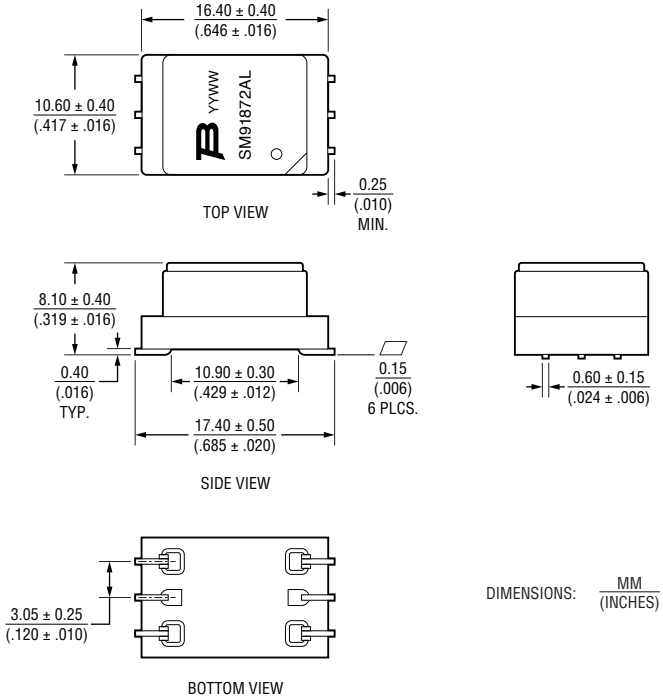
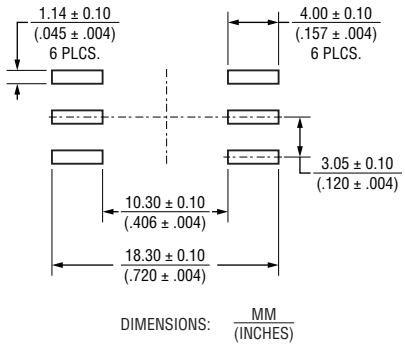
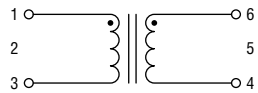
### Product Dimensions




### 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

*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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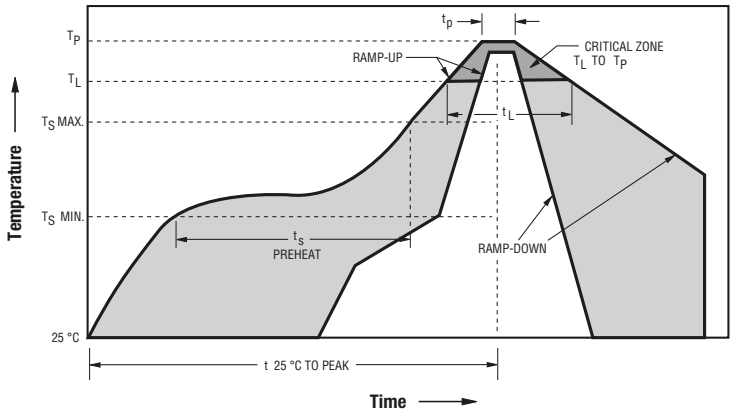
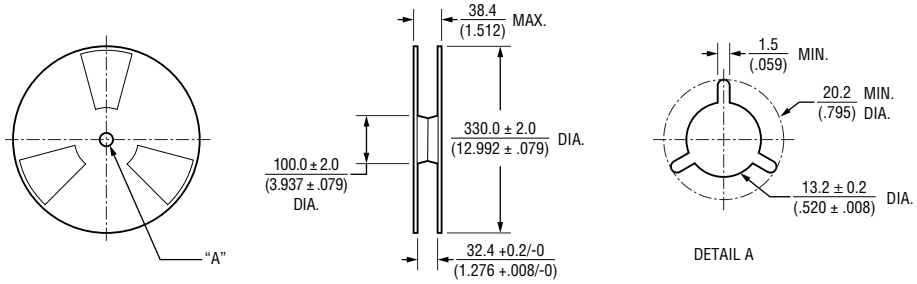
## Solder Profile

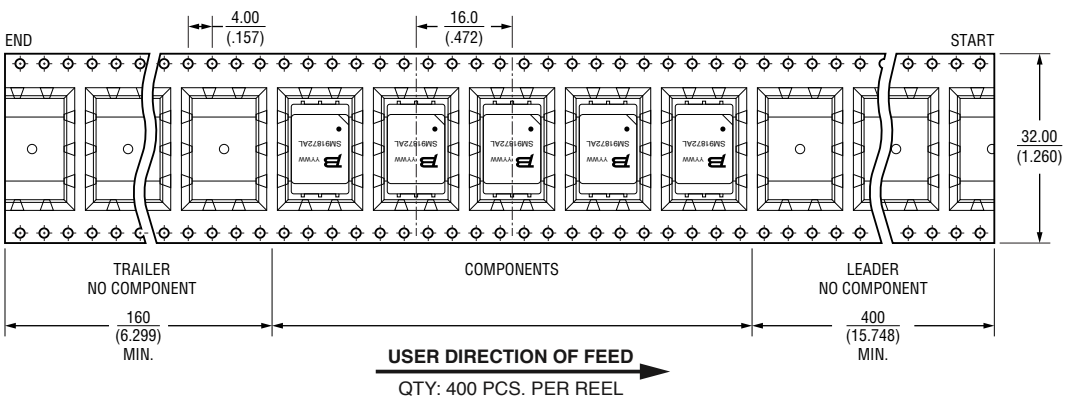



| Profile Feature | Pb-Free Assembly |
|---|---|
| Average Ramp-Up Rate | 3 °C / second max. |
| PREHEAT:<br>Temperature Min. ($T_{smin}$)<br>Temperature Max. ($T_{smax}$)<br>Time ($T_{smin}$ to $T_{smax}$) | <br>150 °C<br>200 °C<br>60~180 seconds |
| Liquidus Temperature ($T_L$) | 217 °C |
| Time Above 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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