



## Features

- Working voltage up to 1000 VDC
- Hi-Pot: 3500 VAC, 1 mA, 60 s
- Reinforced insulation per IEC 62368-1
- Clearance distance >10.5 mm
- Creepage distance >11.5 mm
- Overvoltage Category II, pollution degree 2, material group I
- RoHS\* and AEC-Q200 compliant

## SM91523AL BMS Transformer

### Additional Information

Click these links for more information:



### General Specifications

Inductance (100 kHz / 0.1 V) (-40 °C ~ +125 °C).....	150 uH ~ 450 uH
Leakage Inductance (100 kHz / 0.1 V) .....	0.6 µH max.
DCR	
1-3.....	0.45 Ω max.
4-6.....	0.85 Ω max.
Turns Ratio.....	1:1 ±2 %
Insertion Loss	
4 MHz.....	-0.3 dB max.
Return Loss	
4 MHz.....	-20 dB min.
Hi-Pot (1 mA, 60 s).....	3500 VAC
Common Mode Rejection Ratio	
1 ~ 100 MHz.....	-35 dB min.
Impulse Voltage.....	10 kV, 1.2/50 µs
Working Voltage.....	up to 1000 VDC
Operating Temperature Range	
.....	-40 °C to +125 °C
Storage Temperature Range	
.....	-25 °C to +85 °C

### Packaging Specification

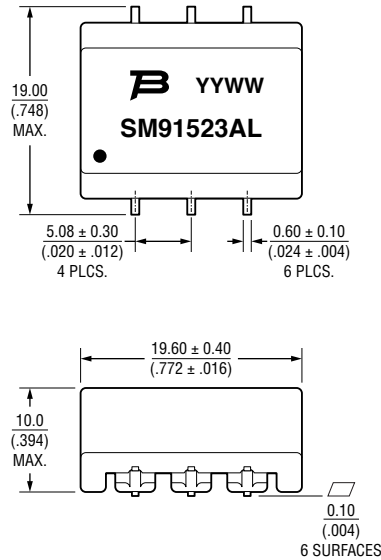
Tape & Reel..... 200 pcs. per 13-inch reel

### How To Order

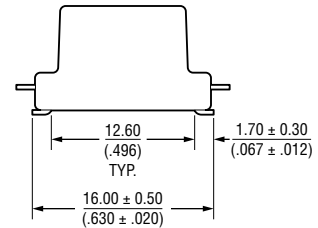
**SM91523 A L - E**

Model \_\_\_\_\_  
 AEC-Q200 Compliant \_\_\_\_\_  
 RoHS Compliancy Designator \_\_\_\_\_  
 Packaging \_\_\_\_\_  
 E = Tape and Reel Packaging

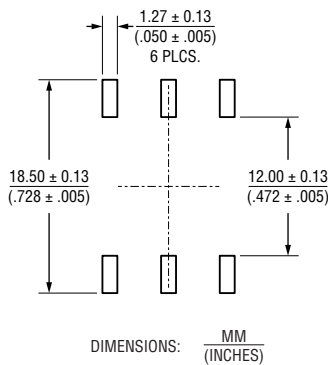
### Product Dimensions



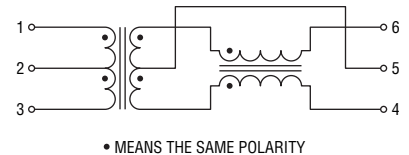
DIMENSIONS:  $\frac{\text{MM}}{\text{(INCHES)}}$



### Recommended Layout



### Electrical Schematic



**CALIFORNIA WARNING:** Can expose you to lead, a carcinogen and reproductive toxicant.

See [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

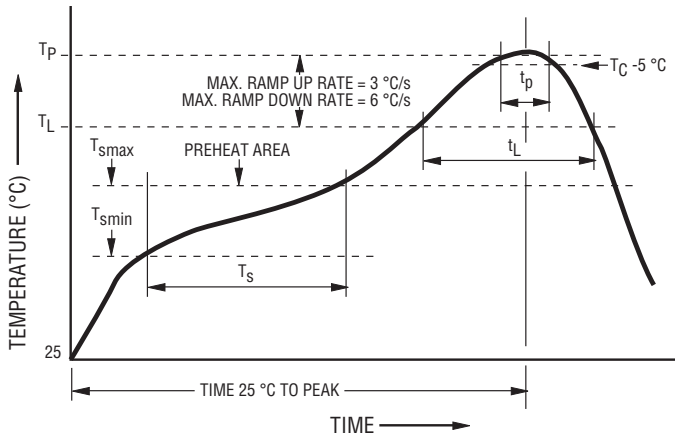
\*RoHS Directive 2015/863, Mar 31, 2015 and Annex.

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

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## Solder Reflow Recommendations



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.

\*Tolerance for peak profile temperature ( $T_p$ ) is defined as a supplier minimum and a user maximum.

## Pb-Free Process Classification Temperatures ( $T_c$ )

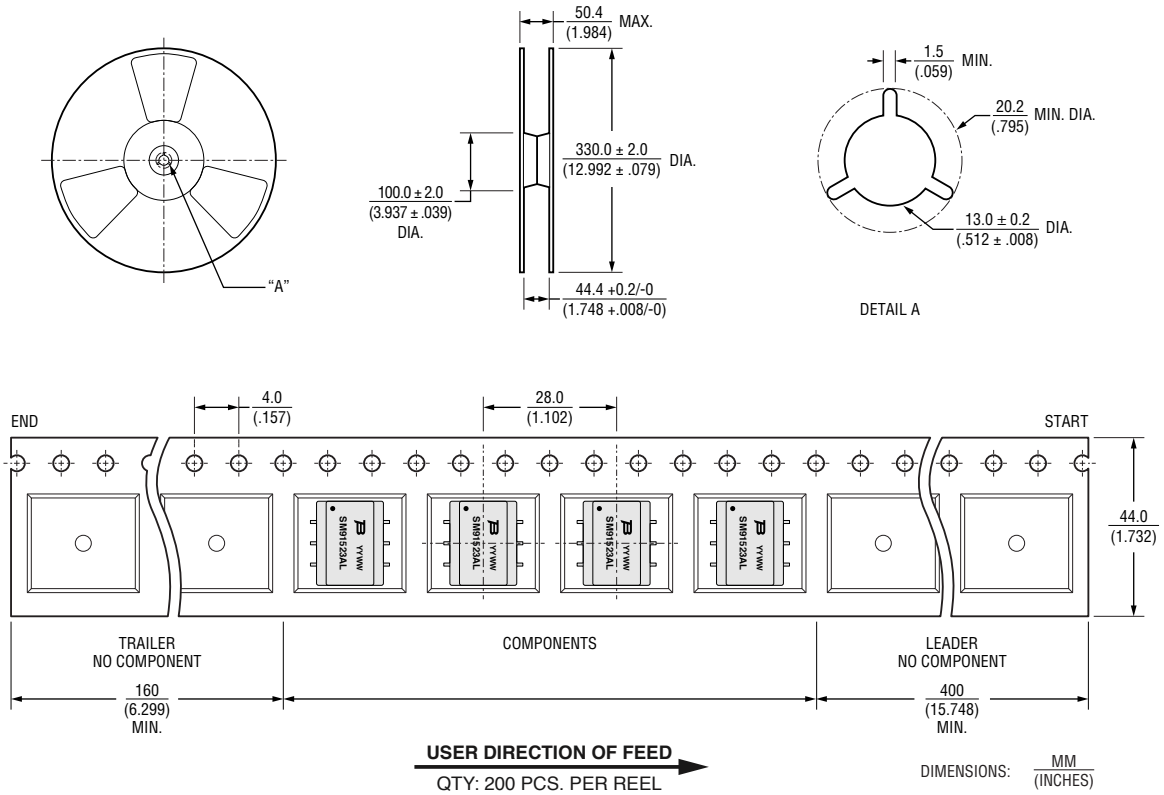
Package Thickness	Volume mm <sup>3</sup> < 350	Volume mm <sup>3</sup> 350 - 2000	Volume mm <sup>3</sup> > 2000
< 1.6 mm	260 °C	260 °C	260 °C
1.6 mm - 2.5 mm	260 °C	250 °C	245 °C
> 2.5 mm	250 °C	245 °C	245 °C

# SM91523AL BMS Transformer

**BOURNS®**

## Packaging Specifications

Specifications and tolerances comply with EIA-481 requirements.



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