

## Features

- First pin auto-termination
- Working voltage: 1000 VDC
- Hi-Pot: 4300 VDC
- Single channel with integrated choke
- Functional insulation
- Developed for use with Analog Device's Model LTC6804-1/681X, NXP's Model MC33771/33772 and Texas Instruments' Model BQ79616
- AEC-Q200 compliant
- RoHS compliant\* and halogen free\*\*

## SM91502ALA BMS Transformer

### Electrical Specifications @ 25 °C

OCL (-40 ~ +125 °C)	..... 150 ~ 450 $\mu$ H @ 100 kHz, 0.1 V
Leakage Inductance	..... 0.5 $\mu$ H max. @ 100 kHz, 0.1 V
DCR	
Transformer Side	..... 0.45 $\Omega$ max.
CM Choke Side	..... 0.85 $\Omega$ max.
Turns Ratio	..... 1:1 $\pm$ 2 %
Insertion Loss	
4 MHz	..... -0.25 dB max.
Return Loss (Z out = 100 $\Omega$ )	
4 MHz	..... -22 dB min.
Common Mode Rejection Ratio	
1~100 MHz	..... -35 dB min.
100~200 MHz	..... -28 dB min.
Hi-Pot (1 mA, 60 s)	..... 4300 VDC
Working Voltage	..... 1000 VDC
Operating Temperature	..... -40 °C to +125 °C
Storage Temperature	..... -50 °C to +125 °C
Moisture Sensitivity Level	..... 1
ESD Classification (HBM)	..... N/A

### Packaging Specifications

Tape & Reel ..... 800 pcs./reel

### How To Order

**SM91502 A L A - E**

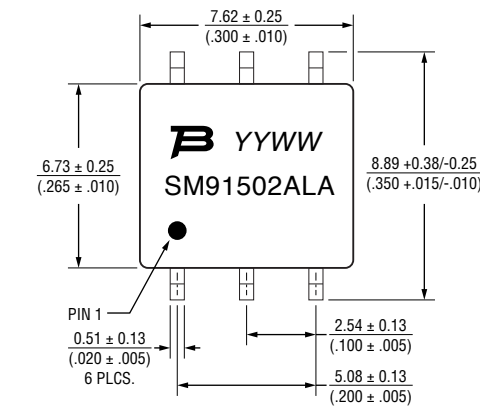
Model	_____
Compliance	_____
A = AEC-Q200 Compliant	_____
Termination	_____
L = Tin (RoHS Compliant)	_____
Auto Pin Termination	_____
Packaging	_____
E = Tape and Reel	_____

### Additional Information

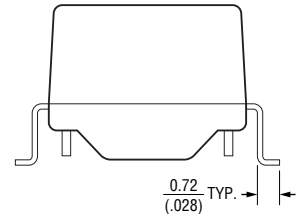
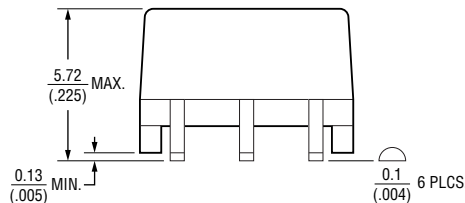
Click these links for more information:



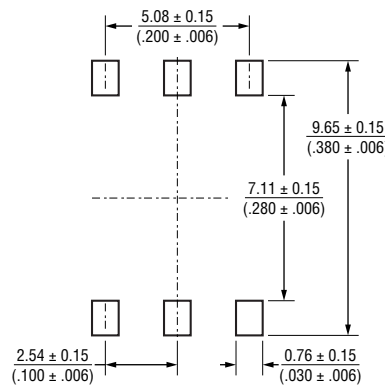
### Product Dimensions



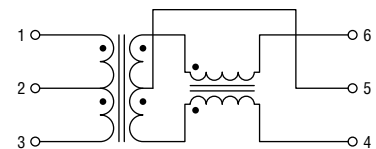
DIMENSIONS:  $\frac{\text{MM}}{\text{(INCHES)}}$



### Recommended Layout



### Electric Schematic



**WARNING Cancer and Reproductive Harm**  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

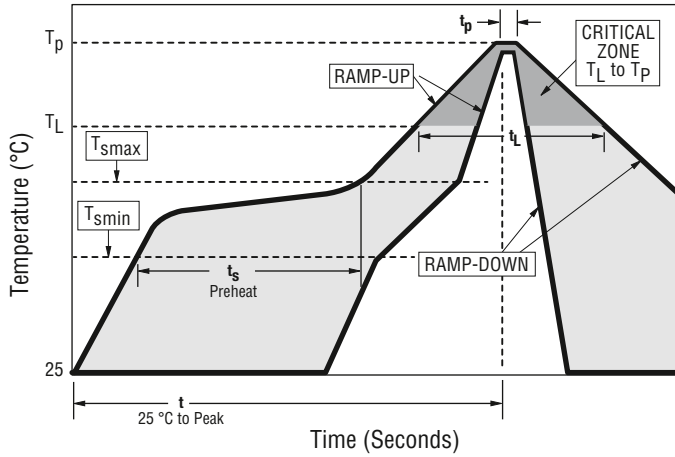
\* RoHS Directive 2015/863, Mar 31, 2015 and Annex.

\*\*Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.

Specifications are subject to change without notice. Users should verify actual device performance in their specific applications.

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**Solder Profile**



Reflow Condition		Pb-free Assembly
Average Ramp-up Rate		3 °C / second max.
Preheat	Temperature Min. ( $T_{smin}$ )	150 °C
	Temperature Max. ( $T_{smax}$ )	200 °C
	Time ( $T_{smin}$ to $T_{smax}$ )	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 from 25 °C to Peak Temperature ( $T_p$ )		8 minutes max.
Do not Exceed		260 °C

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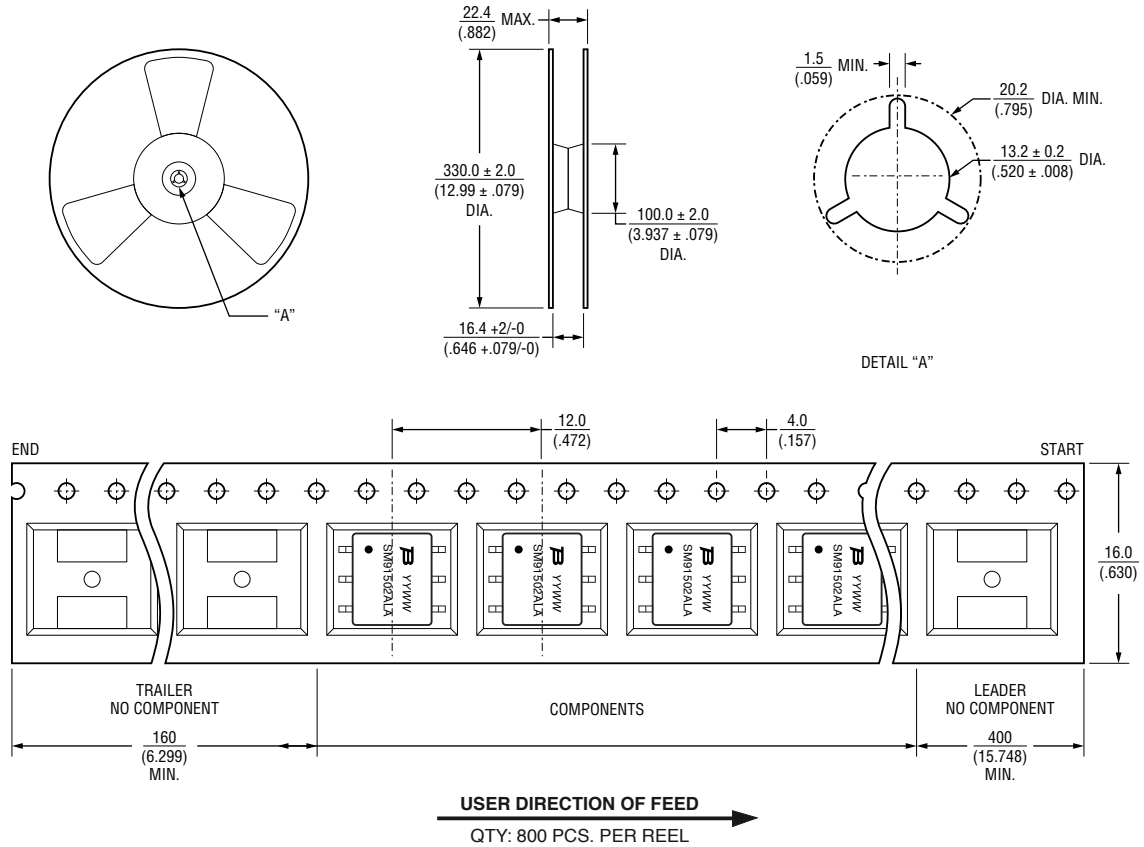
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# SM91502ALA BMS Transformer

**BOURNS®**

## Packaging Specifications

Specifications and tolerances comply with EIA-481 requirements.



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

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