

## Features

- One channel with choke
- Supports serial daisy chain / IsoSPI
- Holds reference designs with Analog Device's Model LTC6804-1/6811 and NXP's MC33771/33772
- Operating temperature: -40 to +125 °C
- 1000 Vdc working voltage
- Hi-Pot: 4300 Vdc
- AEC-Q200 compliant
- RoHS compliant\*

## SM91502AL BMS Transformer

### Electrical Specifications @ 25 °C

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

### Packaging Specifications

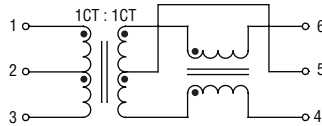
Tape & Reel ..... 800 pcs./13-inch reel

### How To Order

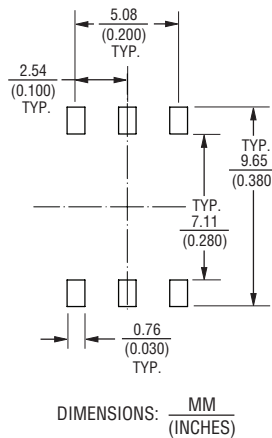
**SM91502 A L E**

Model	_____
Automotive Grade Designator	_____
A = AEC-Q200 Compliant	
Termination	_____
L = Cu/Ni/Sn (RoHS compliant*)	
Packaging	_____
E = Tape and Reel (800 pcs./13-inch reel)	

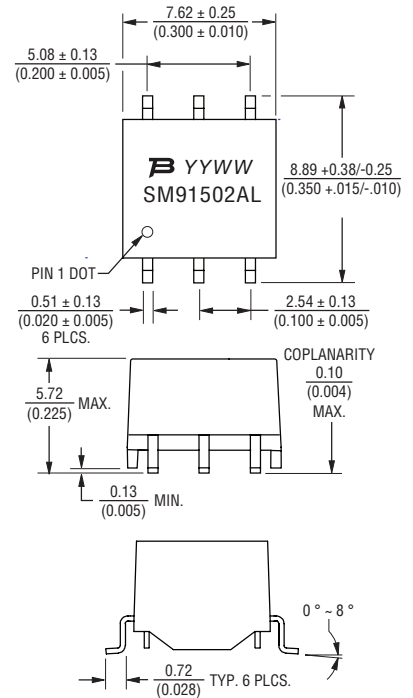
### Electrical Schematic



### Recommended Layout



### Product Dimensions



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

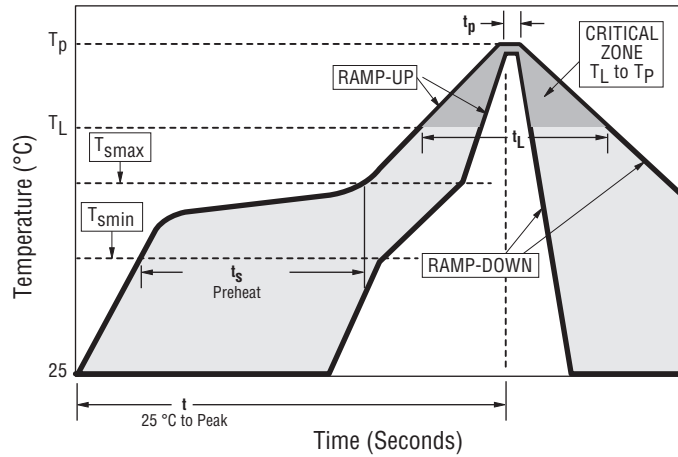
\*RoHS Directive 2015/863, Mar 31, 2015 and Annex.

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

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Solder Profile



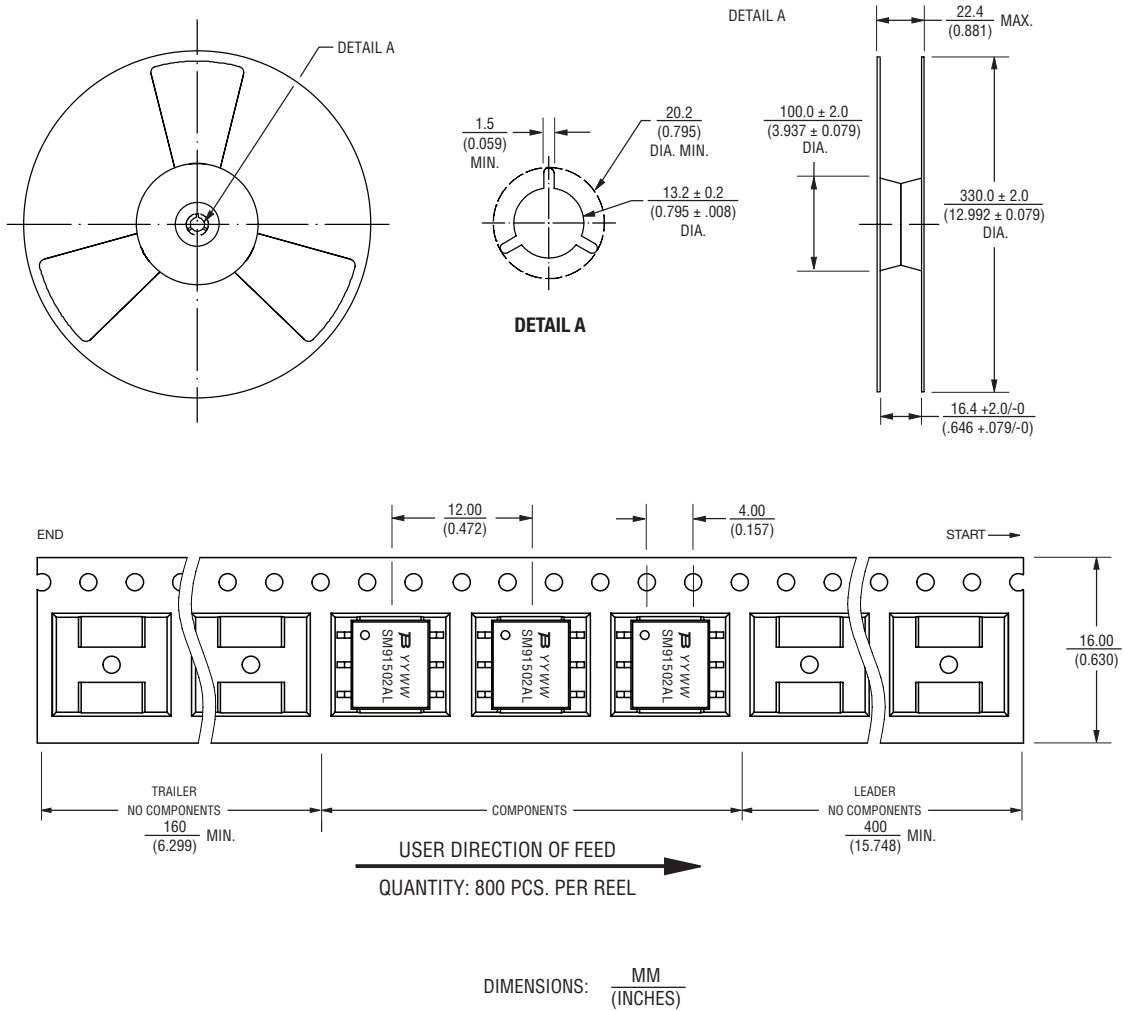
Profile Feature	Pb Free Assembly
Average Ramp Rate (T <sub>Smax</sub> to T <sub>P</sub> )	3 °C/second max.
Preheat <ul style="list-style-type: none"> <li>- Temperature Min. (T<sub>Smin</sub>)</li> <li>- Temperature Max. (T<sub>Smax</sub>)</li> <li>- Time (t<sub>smin</sub> to t<sub>smax</sub>)</li> </ul>	150 °C 200 °C 60-180 seconds
Time Maintained Above <ul style="list-style-type: none"> <li>- Temperature (T<sub>L</sub>)</li> <li>- Time (t<sub>L</sub>)</li> </ul>	217 °C 60-150 seconds
Peak Temperature (T <sub>P</sub> )	245 °C ~ 250 °C
Time within 5 °C of Actual Peak Temperature (t <sub>p</sub> )	20-40 seconds
Ramp-Down Rate	6 °C/second max.
Time 25 °C to Peak Temperature	8 minutes max.

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# SM91502AL BMS Transformer

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## Packaging Specifications



REV. 10/19

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