



## Features

- Fully automated with overmolding process
- High isolation reliability in a compact size
- Working voltage up to 1000 VDC
- Hi-Pot: 5000 VDC, 1 mA, 60 sec.
- Reinforced insulation between primary and secondary per IEC 60664-1 & IEC 62368-1
- Creepage distance >10.0 mm
- Clearance distance >10.0 mm
- RoHS compliant\*

## SM91243L Power Transformer

### Additional Information

Click these links for more information:



### Electrical Specifications @ 25 °C

Primary Inductance (0.1 V at 500 kHz)	
L (1-3) .....	5.88 $\mu$ H $\pm$ 35 %
Secondary Inductance (0.1 V at 500 kHz)	
L (4-6) .....	5.88 $\mu$ H $\pm$ 35%.
Leakage Inductance (0.1 V at 500 kHz)	
L (1-3, short Pin 6-4) .....	1.5 $\mu$ H max.
L (6-4, short Pin 1-3) .....	1.5 $\mu$ H max.
Capacitance (0.1 V at 500 kHz)	
(1-3,6-4) .....	1.5 pF max.
DC Resistance	
NP (1-3) .....	160 m $\Omega$ max.
NP (6-4) .....	160 m $\Omega$ max.
Turns Ratio	
NP (1-3) : NS (6-4) .....	1:1
Hi-Pot (NP-NS) .....	5.0k VDC, 1 mA, 60 sec.
Impulse Test .....	8000 V
Working Voltage .....	>1000 VDC
Operating Temperature .....	-40 °C to +125 °C
ESD Classification (HBM) .....	N/A

### Packaging Specification

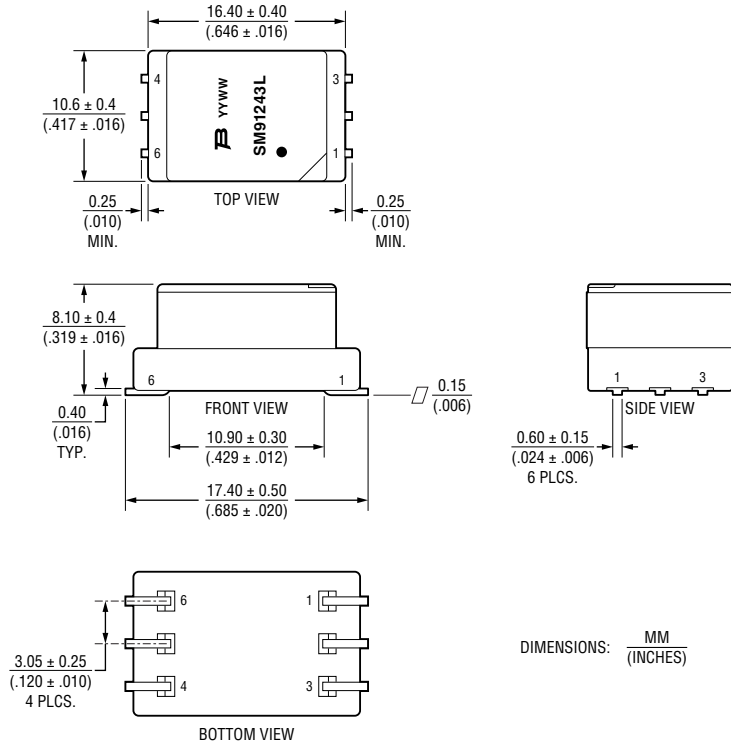
Tape & Reel..... 400 pcs. per 13-inch reel

### How To Order

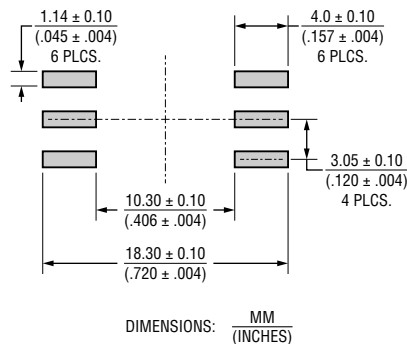
**SM91243 L - E**

Model \_\_\_\_\_  
 RoHS Compliancy Designator \_\_\_\_\_  
 Tape & Reel Packaging \_\_\_\_\_

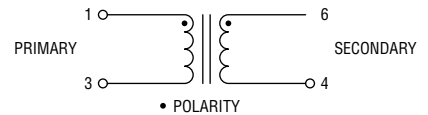
### Product Dimensions



### Recommended Layout



### Electric Schematic



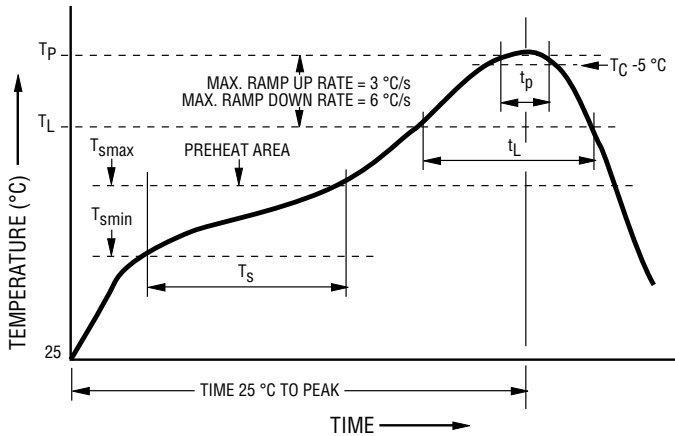
**WARNING**  
**Cancer and Reproductive Harm**  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

\*RoHS Directive 2015/863, Mar 31, 2015 and Annex. 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. ( $T_{psmin}$ ) Temperature Max. ( $T_{psmax}$ ) Time ( $t_s$ ) from ( $T_{psmin}$ to $T_{psmax}$ )	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 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.

## 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

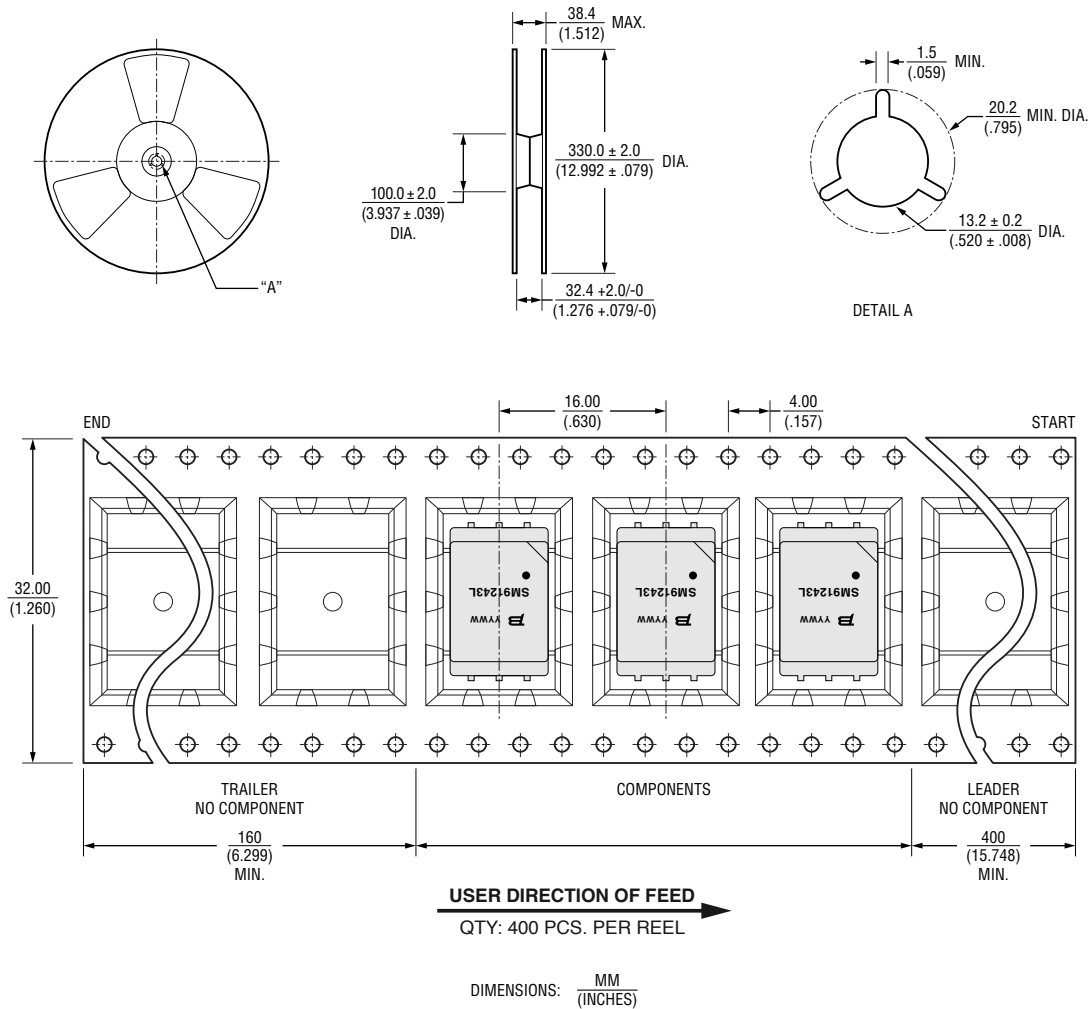
Refer to IPC/JEDEC J-STD-020.

NOTE: This part has been treated under these reflow conditions. Deviations, especially higher temperatures for longer duration, could impact performance.

# SM91234L Power Transformer

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## Packaging Specifications



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