



Features

- Working voltage: up to 1500 VDC
- Hi-Pot: 5600 VAC, 1 mA, 60 sec. or 8000 VDC, 1 mA, 60 sec. Impulse voltage: 12 kV, 1.2/50 μ s
- Partial discharge level up to 2250 V
- Reinforced insulation between primary and secondary per IEC 62477-1, IEC 60664-1 & IEC 62368-1
- Creepage distance >19 mm, pollution degree 2, material group CTI I
- Clearance distance >16 mm, overvoltage category III
- AEC-Q200 compliant
- RoHS compliant*

SM91543AL BMS Transformer

Additional Information

Click these links for more information:



Electrical Specifications @ 25 °C

OCL (100 kHz / 0.1 V) (-40 °C to +125 °C)	150~450 μ H
Leakage Inductance (100 kHz / 0.1 V)	0.6 μ H max.
DCR	
1-3	0.5 Ω max.
4-6	0.6 Ω max.
Turns Ratio	1 : 1
Insertion Loss (1-3)-(6-4) 4 MHz	-1.0 dB max.
Return Loss (1-3)-(6-4) 4 MHz	-20 dB min.
Common Rejection Ratio (1-3)-(6-4) 1-100 MHz	-30 dB max.
Hi-Pot	5600 VAC, 1 mA, 60 sec. or 8000 VDC, 1 mA, 60 sec.
Working Voltage	1500 VDC
Operating Temperature Range	-40 °C to +125 °C
Storage Temperature Range	-25 °C to +85 °C
Moisture Sensitivity Level	1

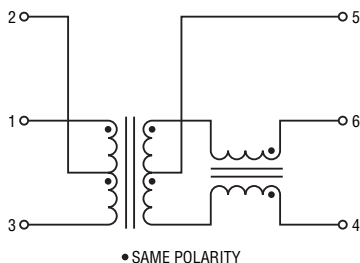
Packaging Specification

Tape & Reel..... 300 pcs. per 13-inch reel

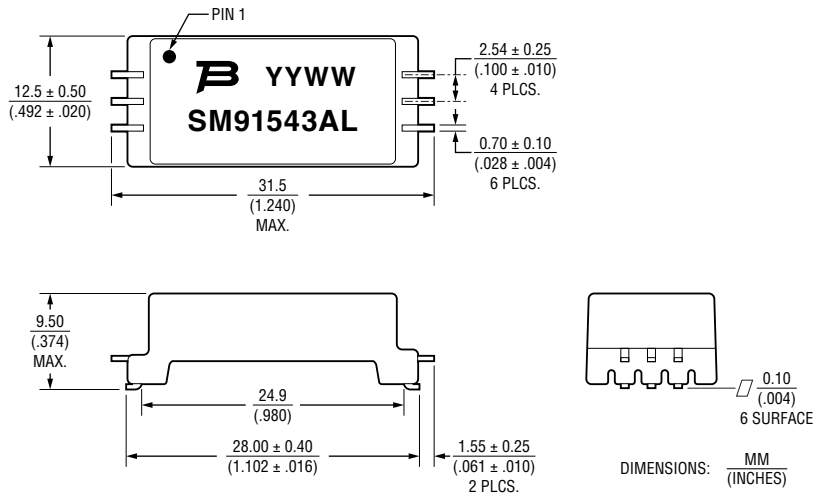
How To Order

	SM91543 A L - E
Model	SM91543
AEC-Q200 Compliance Designator	A
Termination	L = Tin (RoHS Compliant)
Packaging	E = Tape & Reel

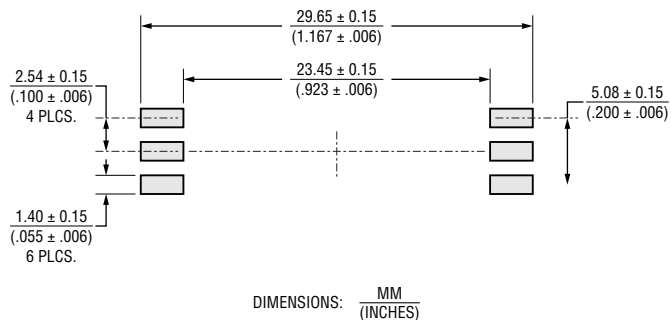
Electric Schematic



Product Dimensions



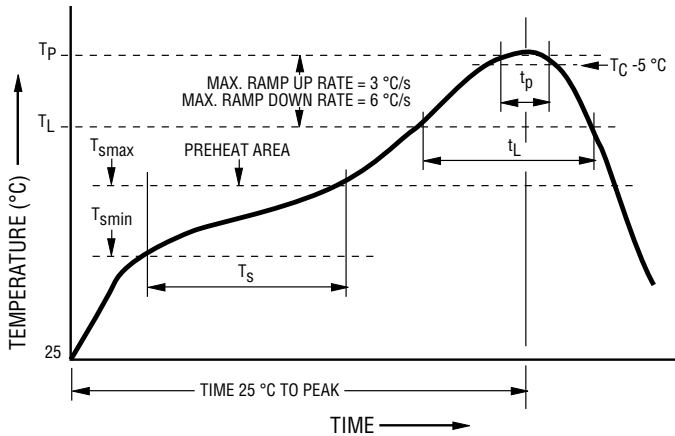
Recommended Layout



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. The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at www.bourns.com/docs/legal/disclaimer.pdf.

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)

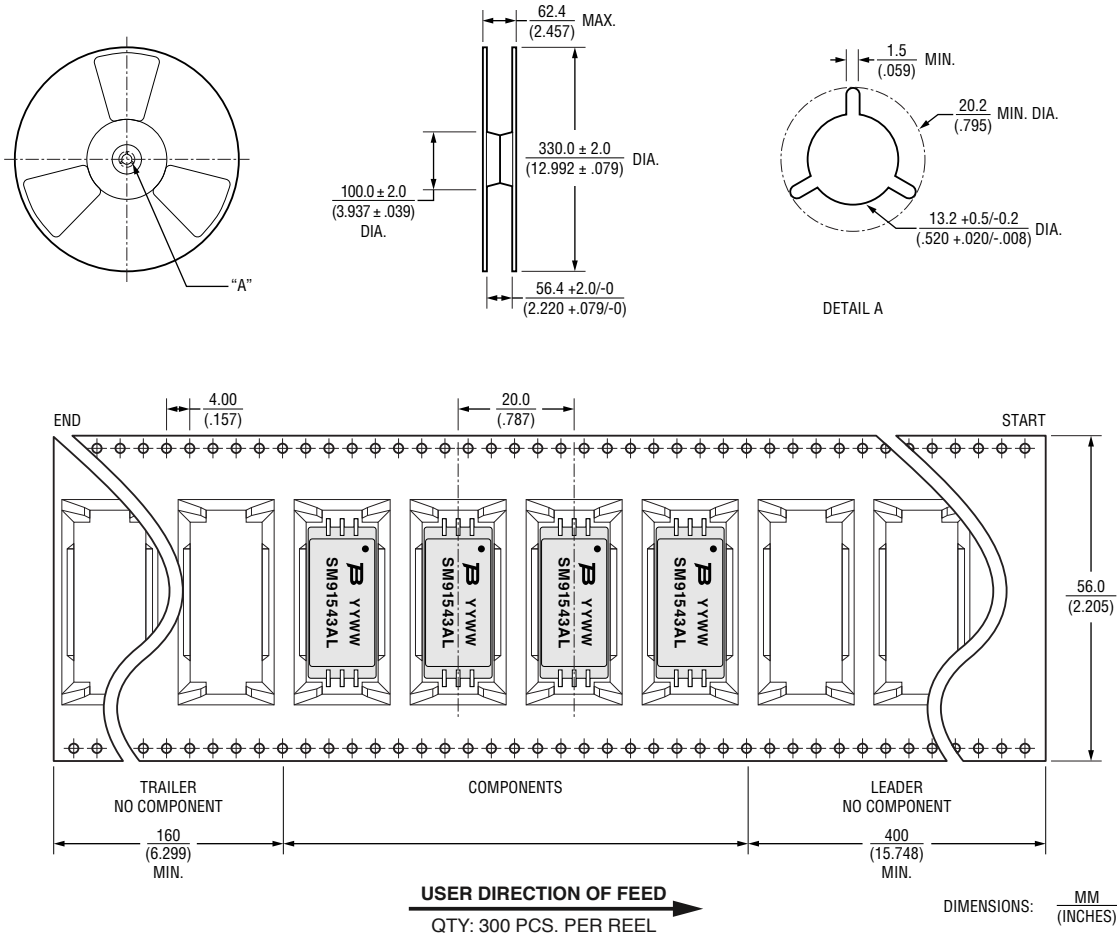
Package Thickness	Volume mm ³ < 350	Volume mm ³ 350 - 2000	Volume mm ³ > 2000
< 1.6 mm	260 °C	260 °C	260 °C
1.6 mm - 2.5 mm	260 °C	250 °C	245 °C
> 2.5 mm	250 °C	245 °C	245 °C

SM91543AL BMS Transformer

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Packaging Specifications

Specifications and tolerances comply with EIA-481 requirements.



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REV. 03/25

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Users should verify actual device performance in their specific applications.

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