



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 Planar 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

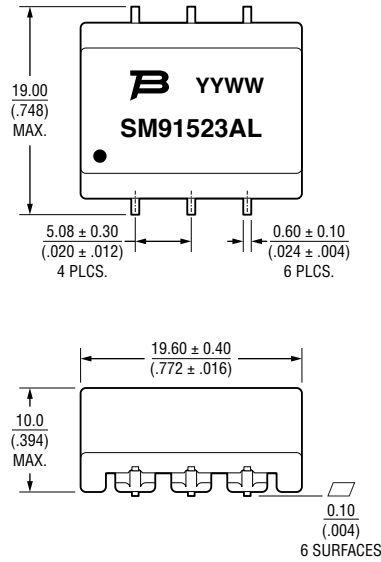
Tape & Reel..... 200 pcs. per 13-inch reel

How To Order

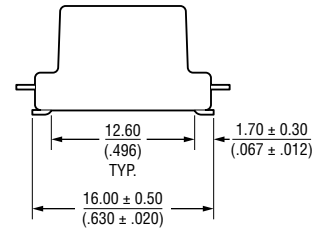
SM91523 A L - E

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

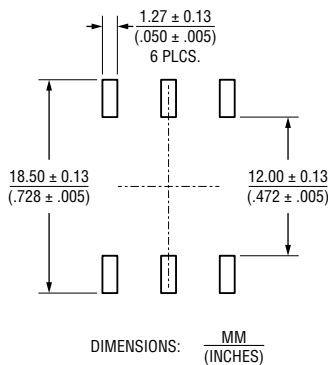
Product Dimensions



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

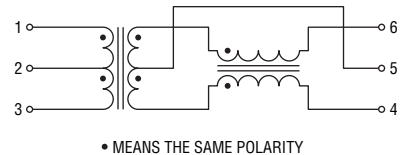


Recommended Layout



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

Electrical Schematic



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.

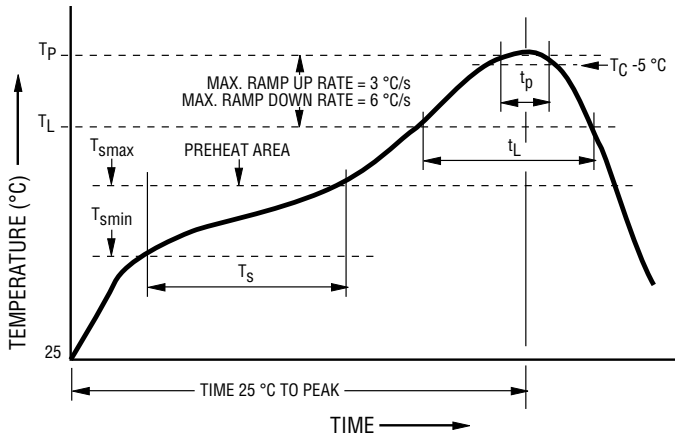
Users should verify actual device performance in their specific applications.

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SM91523AL BMS Planar Transformer



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

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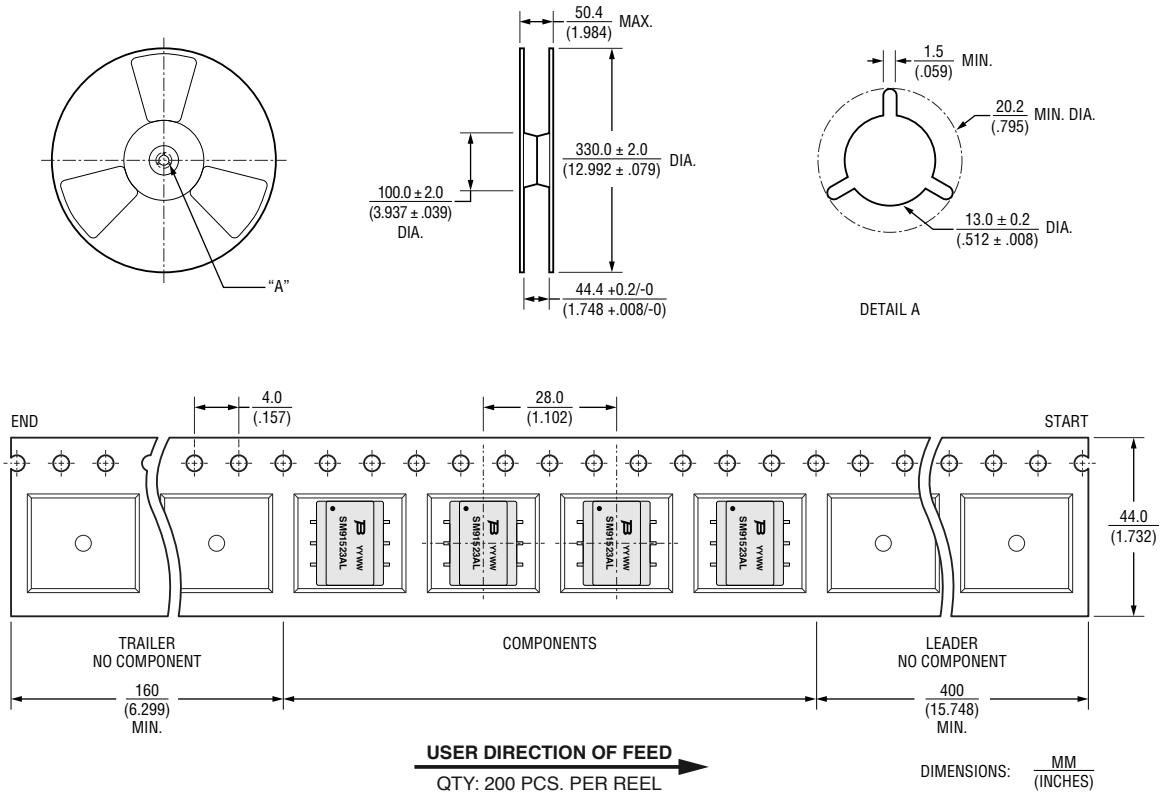
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SM91523AL BMS Planar Transformer

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Packaging Specifications

Specifications and tolerances comply with EIA-481 requirements.



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