



Features

- Planar technology primarily for BMS signal applications
- Working voltage: up to 1000 VDC
- Hi-Pot: 4300 VDC or 2500 VAC
- Basic insulation compliant with IEC 60664/62368-1
- Creepage distance 5 mm minimum, overvoltage category II
- Clearance distance 5 mm minimum up to 5000 m altitude, pollution degree 2, material group CTI I
- Developed for use with Analog Device's LTC6815 series, NXP's MC33771C series and Texas Instruments' model BQ79616
- AEC-Q200 compliant
- RoHS compliant* and halogen free**

SM91801AL BMS Planar 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)
 1.2 μ H max. (0.82 μ H typ.)
 DCR
 Pri. and Sec..... 1.2 Ω max.
 Interwinding Capacitance20 pF max.
 Turns Ratio 1 : 1 \pm 2 %
 Insertion Loss
 4 MHz..... -0.25 dB max.
 Return Loss
 4 MHz..... -16 dB min.
 Hi-Pot (1 mA, 60 sec.)
4300 VDC or 2500 VAC
 Insulation Resistance 50 M Ω min.
 Partial Discharge Level..... 1200 V
 per IEC 60664
 Impulse Voltage up to 4 kV, 1.2/50 μ s
 with conformal coating
 Working Voltage up to 1000 VDC
 Operating Temperature
 -40 °C to +125 °C
 Storage Temperature (Component)
 -40 °C to +125 °C
 Moisture Sensitivity Level..... 1

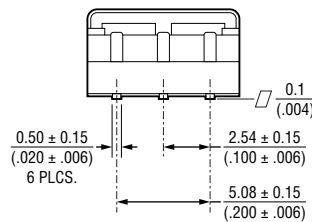
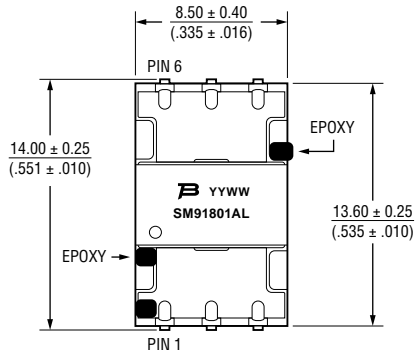
Packaging Specification

Tape & Reel..... 600 pcs. per 13-inch reel

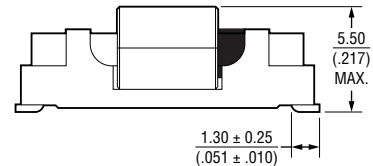
How To Order

Model **SM91801 A L - E**
 AEC-Q200 Compliancy Designator
 Termination
 L = Tin (RoHS Compliant)
 Packaging
 E = 600 pcs. per 13-inch Reel

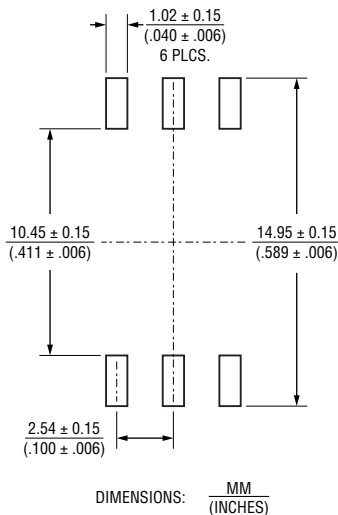
Product Dimensions



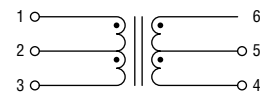
DIMENSIONS: $\frac{\text{MM}}{\text{(INCHES)}}$



Recommended Layout



Electric Schematic



Agency Recognition

Agency	Agency File No.	Category
UL	UL62368-1	E515965



WARNING Cancer and Reproductive Harm www.P65Warnings.ca.gov

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

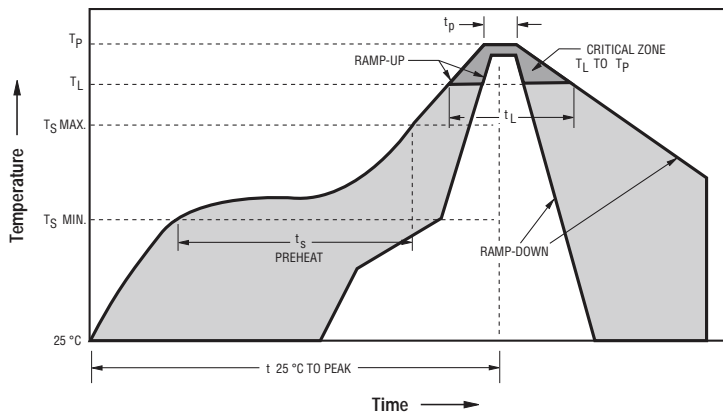
** Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.

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SM91801AL BMS Planar Transformer

BOURNS®

Reflow Solder Profile



Profile Feature	Pb-Free Assembly
Average Ramp-Up Rate	3 °C / second max.
PREHEAT: Temperature Min. (T_{Smin}) Temperature Max. (T_{Smax}) Time (T_{Smin} to T_{Smax})	150 °C 200 °C 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 25 °C to Peak Temperature (T_P)	8 minutes max.
Do Not Exceed	250 °C

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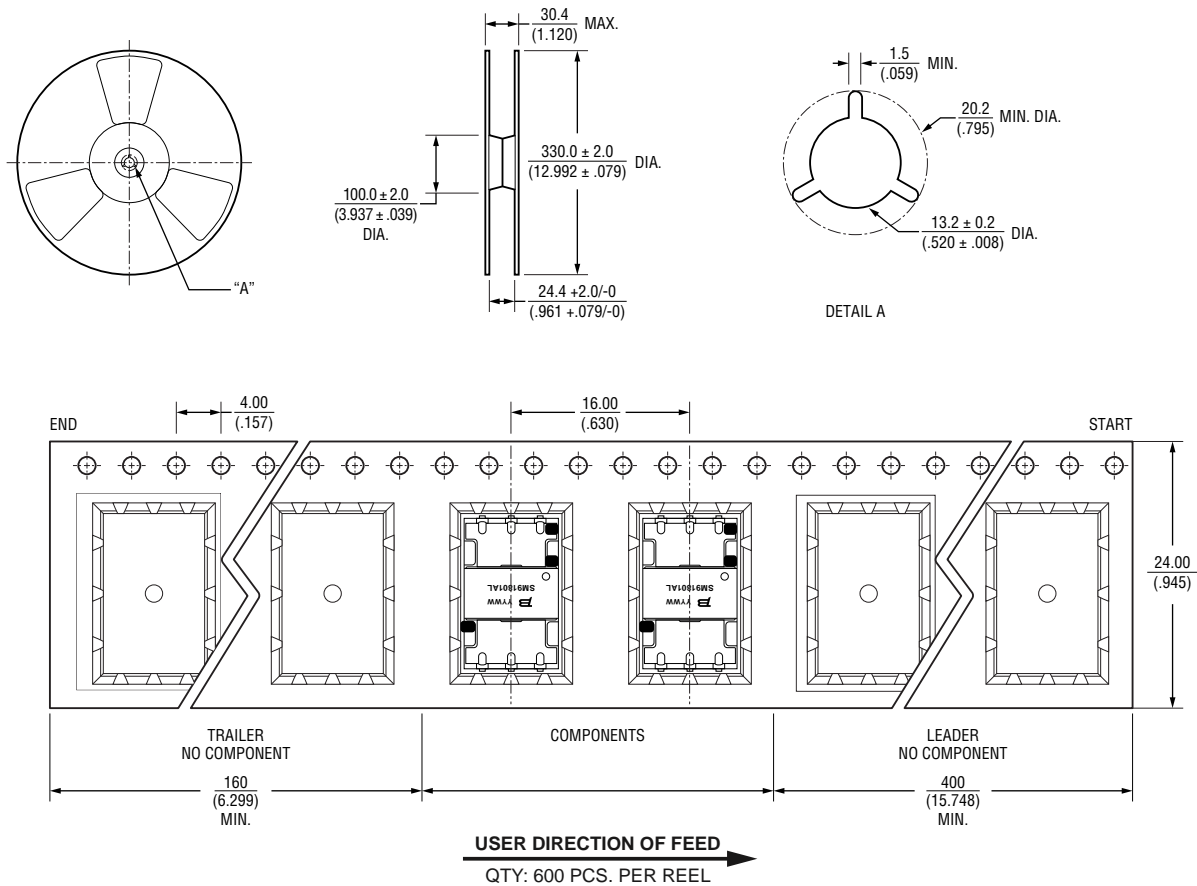
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SM91801AL BMS Planar Transformer

BOURNS®

Packaging Specifications



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

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