

Features

- Two channels 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
- 1600 Vdc working voltage

- Hi-Pot: 4300 Vdc
- AEC-Q200 compliant
- RoHS compliant*

SM91501AL BMS Transformer

Electrical Specifications @ 25 °C

OCL

(100 kHz, 0.1 V, (-40 °C ~ +125 °C))
 150 μ H min.
 450 μ H max.

Leakage Inductance

(100 kHz, 0.1 V) 0.5 μ H max.

DCR

Transformer Side 0.45 ohms max.

CM Choke Side 0.85 ohms max.

Turns Ratio 1:1 \pm 2 %

Insertion Loss

4 MHz -0.25 dB max.

Return Loss (Z out = 100 ohms)

4 MHz -22 dB min.

Cross Talk (Between Each Channel)

4 MHz -50 dB min.

Common Mode Rejection Ratio

1~200 MHz -35 dB min.

Hi-Pot (1 mA, 60 sec.)

..... 4300 VDC or 3100 VAC

Design Construction

..... Functional insulation

Working Voltage ..1600 Vdc for 15 years

Creepage Distance >10 mm

Operating Temperature Range

..... -40 °C to +125 °C

Storage Temperature Range

..... -50 °C to +125 °C

Moisture Sensitivity Level 1

ESD Classification (HBM) N/A

Packaging Specifications

Tape & Reel 400 pcs./13-inch reel

How To Order

SM91501 A L E

Model _____

Automotive Grade Designator _____

A = AEC-Q200 Compliant

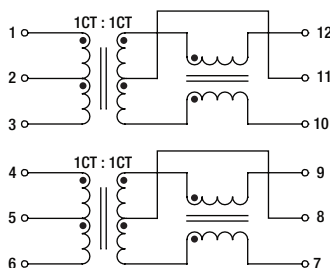
Termination _____

L = Cu/Ni/Sn (RoHS compliant*)

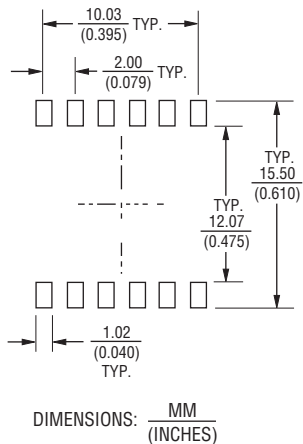
Packaging _____

E = Tape and Reel (400 pcs./13-inch reel)

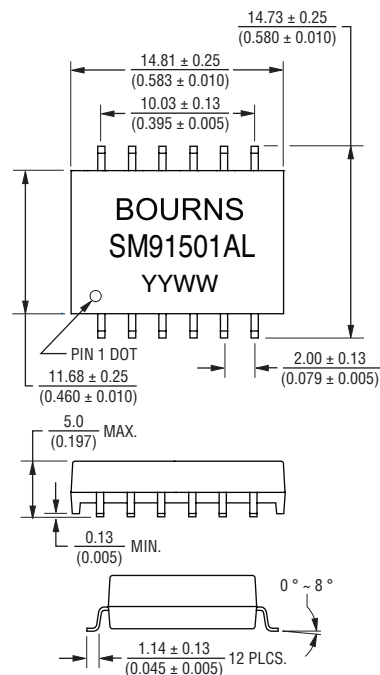
Electrical Schematic



Recommended Layout



Product Dimensions



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

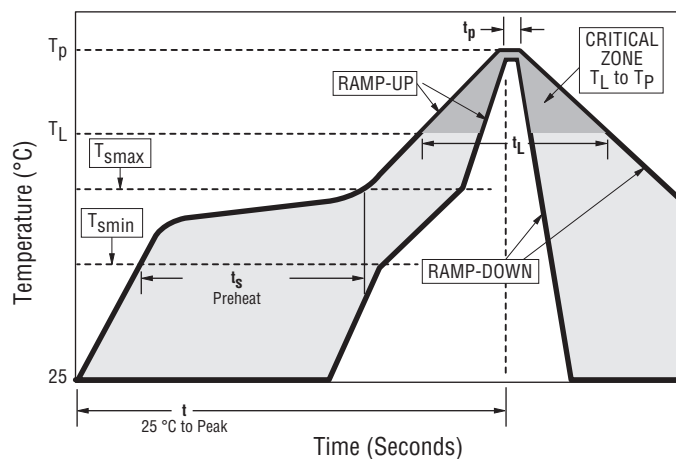
*RoHS Directive 2015/863, Mar 31, 2015 and Annex.

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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_{smax} to T_p)	3 °C/second max.
Preheat <ul style="list-style-type: none"> - Temperature Min. (T_{smin}) - Temperature Max. (T_{smax}) - Time (t_{smin} to t_{smax}) 	150 °C 200 °C 60-180 seconds
Time Maintained Above <ul style="list-style-type: none"> - Temperature (T_L) - Time (t_L) 	217 °C 60-150 seconds
Peak Temperature (T_p)	260 °C +0/-5 °C
Time within 5 °C of Actual Peak Temperature (T_p)	20-40 seconds
Ramp-Down Rate	6 °C/second max.
Time 25 °C to Peak Temperature	8 minutes max.

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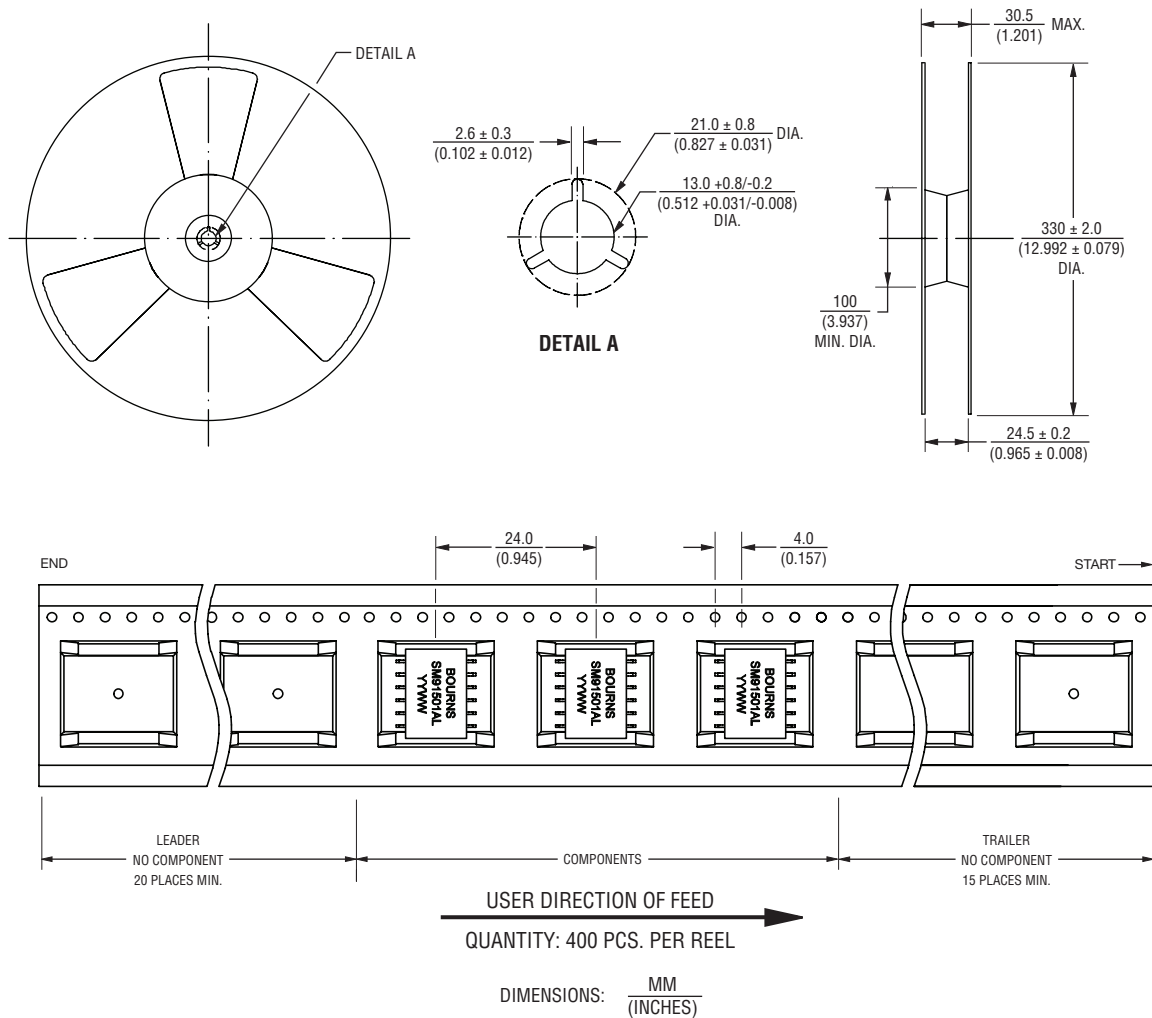
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SM91501AL BMS Transformer

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Packaging Specifications



09/18

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