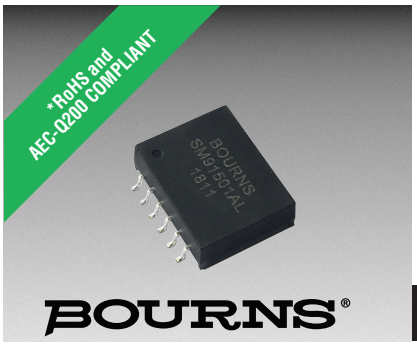


BOURNS®

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 µH min.
450 µH max.
Leakage Inductance
(100 kHz, 0.1 V) ..... 0.5 µH max.
DCR
Transformer Side ..... 0.45 ohms max.
CM Choke Side ..... 0.85 ohms max.
Turns Ratio .....1:1 ±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

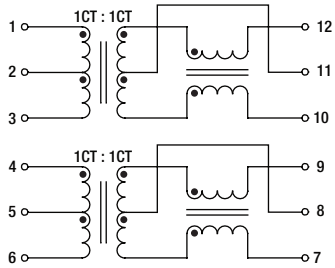
Tape & Reel..... 400 pcs./13-inch reel

How To Order

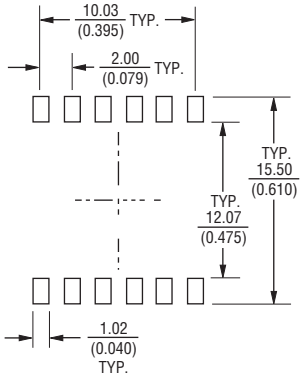
SM91501 A L E

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

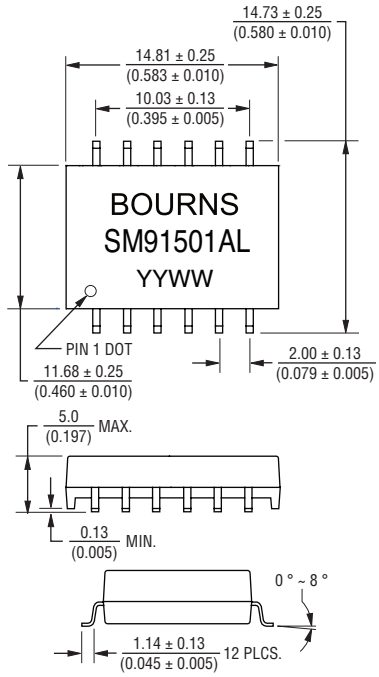


Recommended Layout



DIMENSIONS: MM / (INCHES)

Product Dimensions



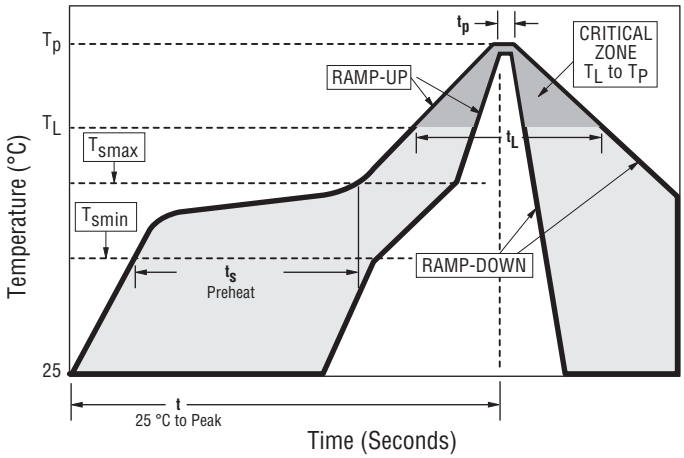
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www.bourns.com

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

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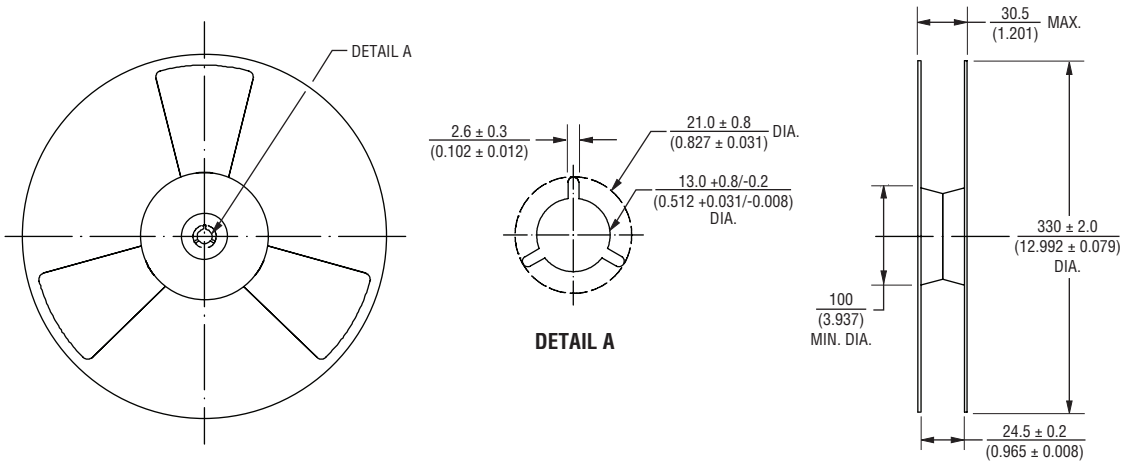
Solder Profile

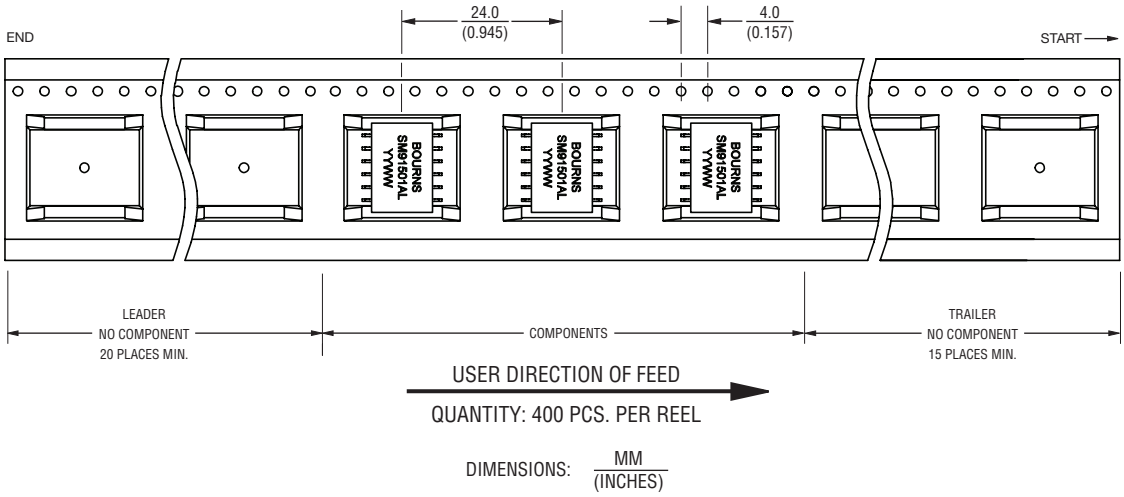


Profile Feature	Pb Free Assembly
Average Ramp Rate (T_{Smax} to T_P)	3 °C/second max.
Preheat - Temperature Min. (T_{Smin}) - Temperature Max. (T_{Smax}) - Time (t_{smin} to t_{smax})	 150 °C 200 °C 60-180 seconds
Time Maintained Above - Temperature (T_L) - Time (t_L)	 217 °C 60-150 seconds
Peak Temperature (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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Packaging Specifications





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