



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

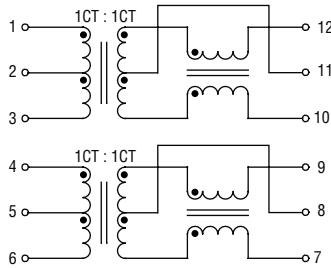
Electrical Specifications @ 25 °C

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
Operating Temperature Range	
.....	-40 °C to +125 °C
Storage Temperature Range	
.....	-25 °C to +85 °C
Moisture Sensitivity Level	1
ESD Classification (HBM)	N/A

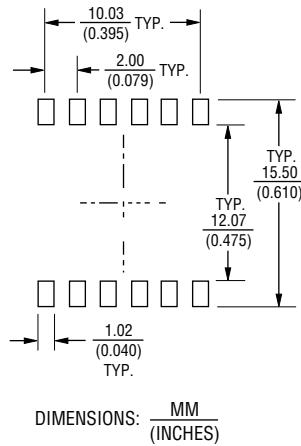
Packaging Specifications

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



Recommended Layout

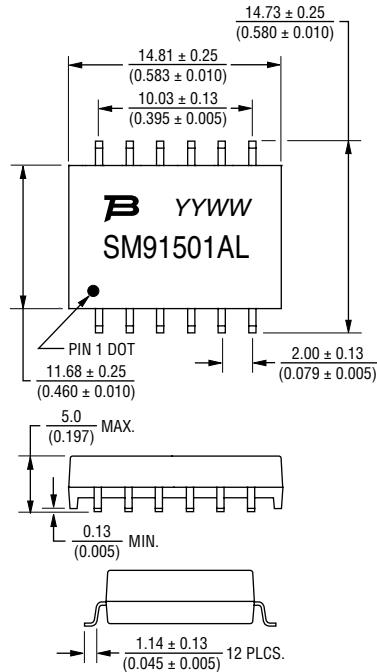


Additional Information

Click these links for more information:



Product Dimensions



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)

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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.

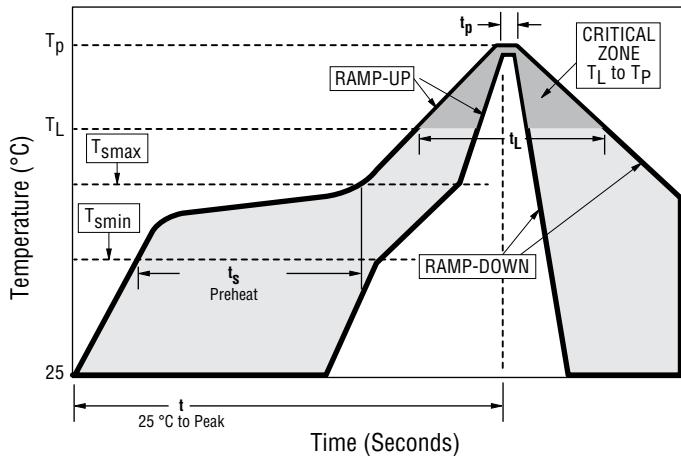
Users should verify actual device performance in their specific applications.

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SM91501AL BMS Transformer

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Solder Profile



Reflow Condition		Pb-free Assembly
Average Ramp-up Rate		3 °C / second max.
Preheat	Temperature Min. (T_{smin})	150 °C
	Temperature Max. (T_{smax})	200 °C
	Time (T_{smin} to T_{smax})	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 from 25 °C to Peak Temperature (T_p)		8 minutes max.
Do not Exceed		260 °C

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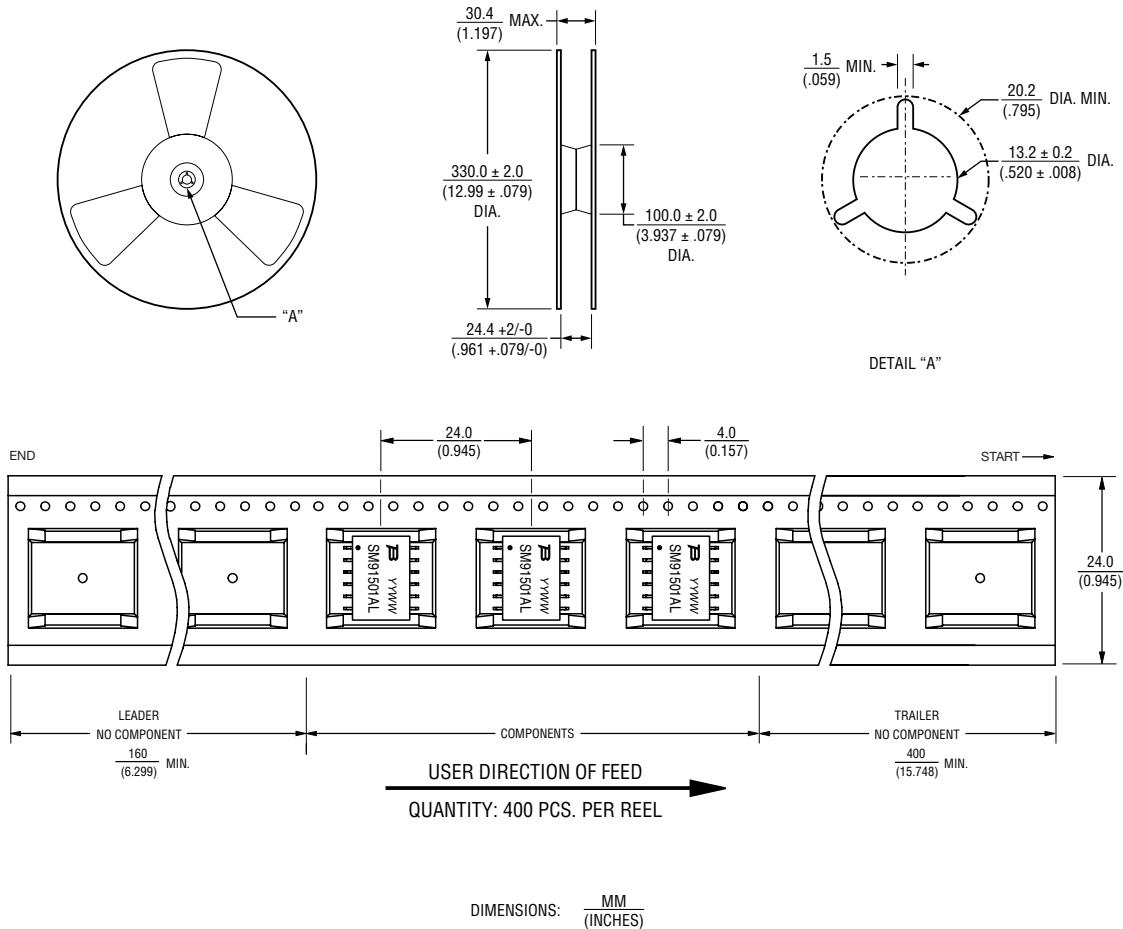
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SM91501AL BMS Transformer

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Packaging Specifications

Specifications and tolerances comply with EIA-481 requirements.



REV. 06/25

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