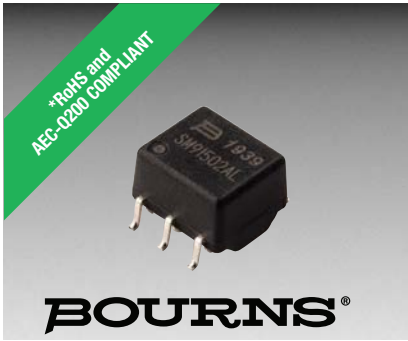




**THE DATASHEET OF
SM91502ALE**





Features

- One channel 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
- 1000 Vdc working voltage
- Hi-Pot: 4300 Vdc
- AEC-Q200 compliant
- RoHS compliant*

SM91502AL 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.
Common Mode Rejection Ratio	
1~100 MHz	-35 dB min.
100~200 MHz	-28 dB min.
Hi-Pot (1 mA, 60 sec.)	
	4300 VDC
Working Voltage	
	1000 Vdc
Design Construction	
	Functional insulation
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

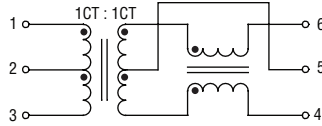
Tape & Reel 800 pcs./13-inch reel

How To Order

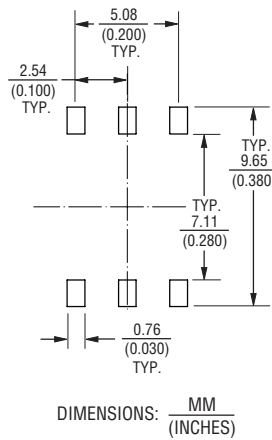
SM91502 A L E

Model	_____
Automotive Grade Designator	_____
A = AEC-Q200 Compliant	
Termination	_____
L = Cu/Ni/Sn (RoHS compliant*)	
Packaging	_____
E = Tape and Reel (800 pcs./13-inch reel)	

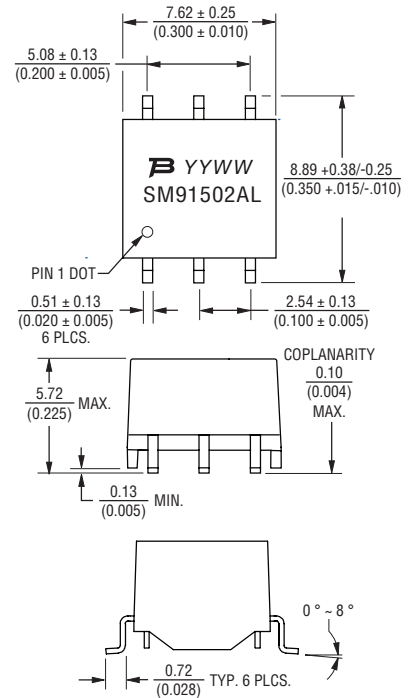
Electrical Schematic



Recommended Layout



Product Dimensions



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Asia-Pacific: Tel: +886-2 2562-4117 • Email: asiacus@bourns.com

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

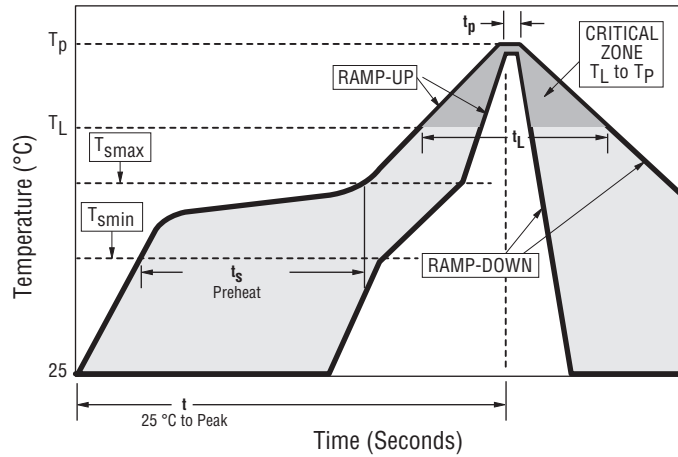
*RoHS Directive 2015/863, Mar 31, 2015 and Annex.

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Users should verify actual device performance in their specific applications.

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Solder Profile

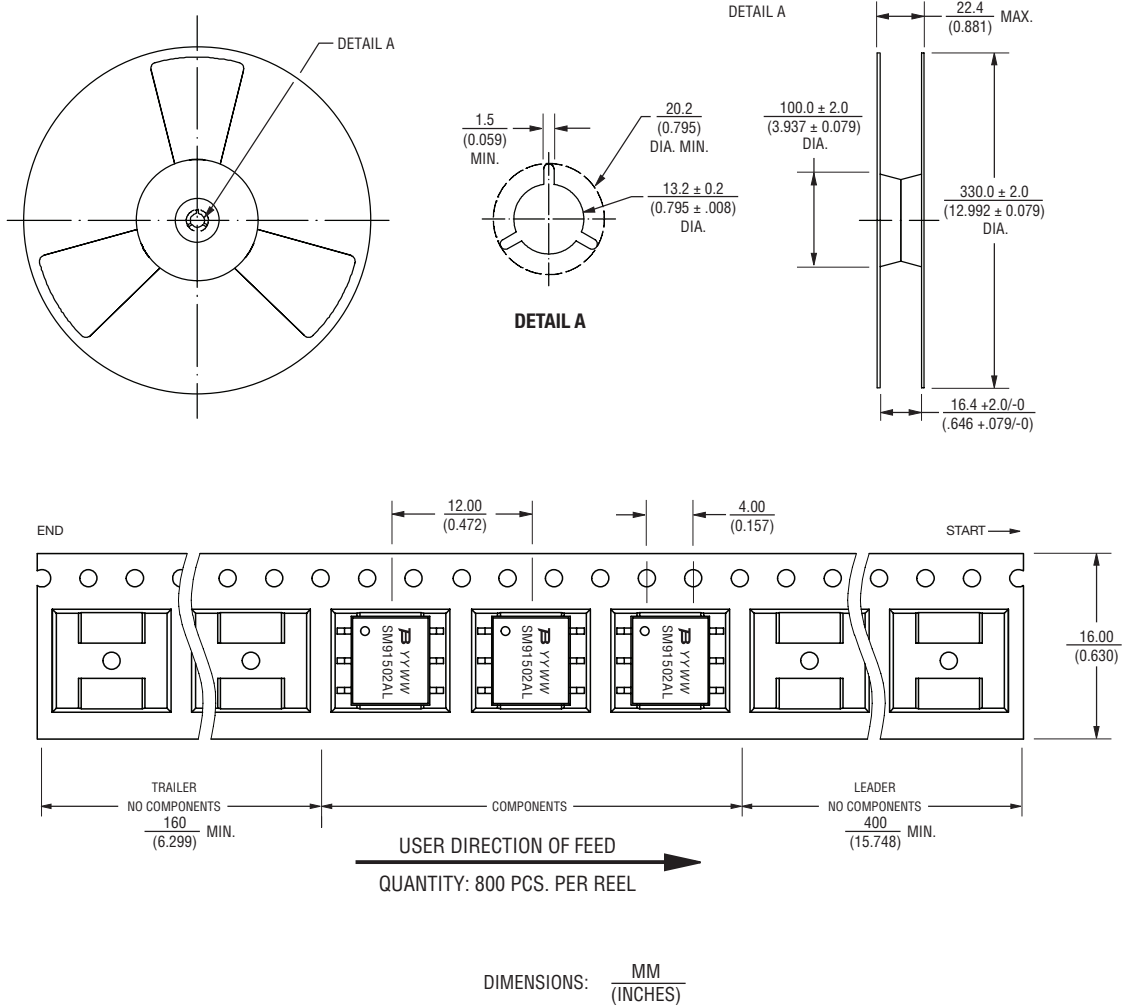


Profile Feature	Pb Free Assembly
Average Ramp Rate (T _{Smax} to T _P)	3 °C/second max.
Preheat <ul style="list-style-type: none"> - Temperature Min. (T_{Smin}) - Temperature Max. (T_{Smax}) - Time (t_{Smin} to t_{Smax}) 	150 °C 200 °C 60-180 seconds
Time Maintained Above <ul style="list-style-type: none"> - Temperature (T_L) - Time (t_L) 	217 °C 60-150 seconds
Peak Temperature (T _P)	245 °C ~ 250 °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.

SM91502AL BMS Transformer

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Packaging Specifications



REV. 10/19

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