



Features

- Pin auto-termination
- Hi-Pot: 3000 VAC
- Working voltage: 1000 VDC
- Single channel with integrated choke
- Developed for use with Analog Device's LTC6804-1/681X, NXP's MC33771/ 33772 and TI's BQ79616
- AEC-Q200 and RoHS compliant*
- Functional insulation

Applications

- Battery Management Systems (BMS) in hybrid and electric powertrain systems
- Energy storage battery packs with Battery Management Systems

Sustainability

- Small size reduces material use
- High pallet density for lower CO₂
- Eco-Logistics-friendly packing
- High efficiency, low power loss

Product Overview

This single-channel functional insulation BMS signal transformer integrates common mode chokes to provide noise rejection and solid isolation in BMS communication circuits with Hi-Pot isolation voltage up to 3,000 VAC.

Electrical Specifications @ 25 °C

Inductance (100 kHz/0.1 V)
(-40 °C ~ +125 °C) 150~450 µH

Leakage Inductance
(1-3) with (6-4) shorted 0.5 µH max.

DCR
1-3 0.45 Ω max.
4-6 0.85 Ω max.

C_{ww}
1-6 20 pF max.

Turns Ratio 1:1 ± 2 %

Insertion Loss (1-3)-(6-4)
4 MHz -0.25 dB max.

Return Loss (1-3)-(6-4)
4 MHz -22 dB min.

Hi-Pot (1 mA, 60 S) 3000 VAC

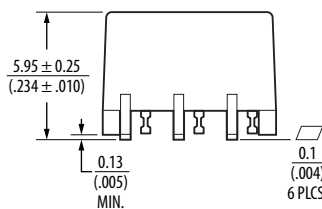
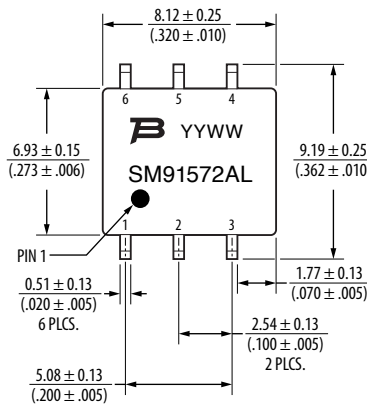
Common Mode Rejection Ratio (1-3)-(6-4)
1~100 MHz -35 dB min.
100~200 MHz -28 dB min.

Operating Temperature Range
..... -40 °C to +125 °C

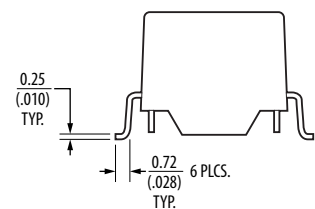
Storage Temperature Range
..... -25 °C to +85 °C

Moisture Sensitivity Level 1

Product Dimensions



DIMENSIONS: MM
(INCHES)



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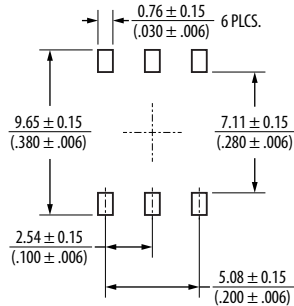
*RoHS Directive 2015/863, Mar 31, 2015 and Annex.

Specifications are subject to change without notice. Users should verify actual device performance in their specific applications.

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Recommended Layout



How to Order

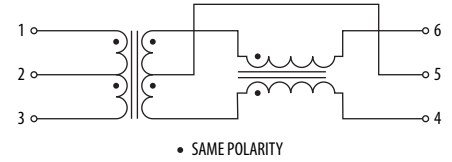
SM91572 A L - E

Model _____
 AEC-Q200 Compliant _____
 RoHS Compliant _____
 Tape & Reel Packaging _____

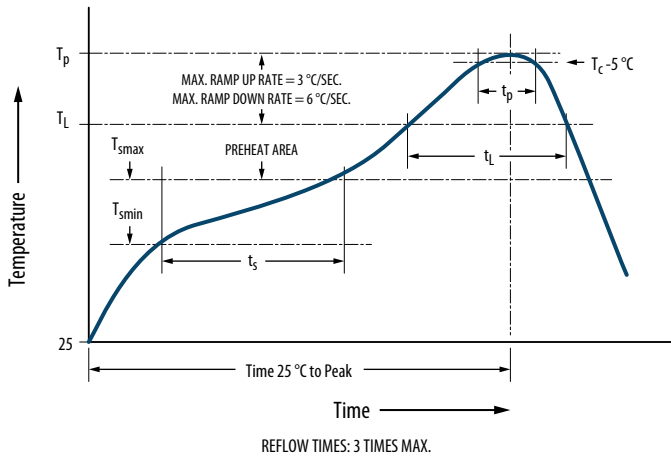
Packaging Specifications

Tape & Reel800 pcs. per 13-inch reel

Electrical Schematic



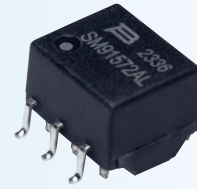
Soldering Profile



Profile Feature	Pb Free Assembly
Preheat - Temperature Min. (T_{smin}) - Temperature Max. (T_{smax}) - Time(t_s) from T_{smin} to T_{smax}	150 °C 200 °C 60-120 seconds
Ramp-up Rate (T_L to T_p)	3 °C/second max.
Liquidous temperature (T_L)	217 °C
Time (t_L) maintained above T_L	60-150 seconds
Peak package body temperature (T_p)	$T_p \leq T_c$ (see below)
Time (t_p) at $T_c - 5$ °C (T_p should be equal to or less than T_c)	< 30 seconds
Ramp-Down Rate (T_p to T_L)	6 °C/second max.
Time 25 °C to Peak Temperature	8 minutes max.

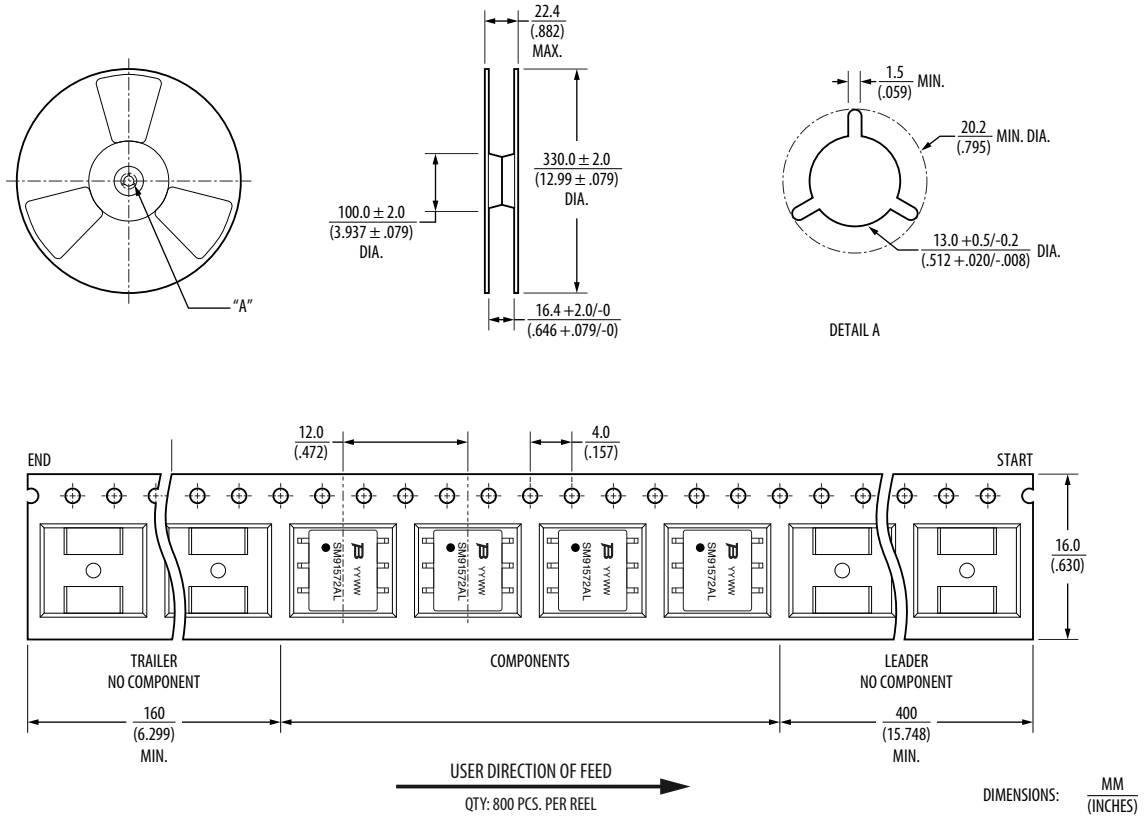
Pb-Free Process Classification Temperatures (T_c)

Package Thickness	Volume <350 mm ³	Volume 350 - 2000 mm ³	Volume >2000 mm ³
<1.6 mm	260 °C	260 °C	260 °C
1.6 ~ 2.5 mm	260 °C	250 °C	245 °C
>2.5 mm	250 °C	245 °C	245 °C



Packaging Information

Specifications and tolerances comply with EIA-481 requirements.



REV. 06/26

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