

Features

- Designed to meet IEEE 802.3u (100 Base-T)
- Expanded temperature range: -40 to +125 °C
- RoHS compliant*
- AEC-Q200 compliant

SM91074AL - 10/100 Base-T Transformer

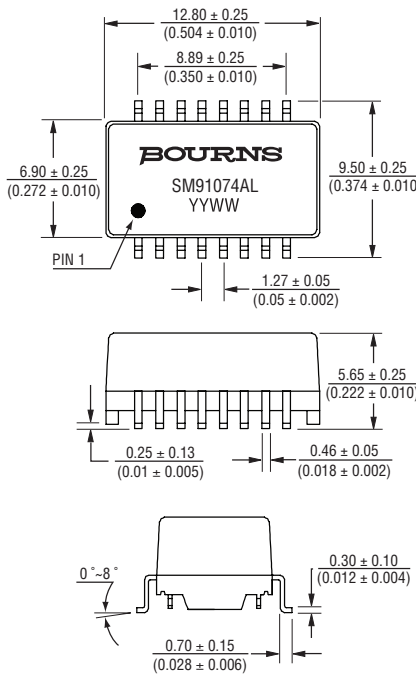
Electrical Specifications @ 25 °C

Inductance (100 kHz, 0.1 V, 8 mA DC)	350 μ H Min.
Leakage Inductance (100 kHz, 0.1 V)	
TD with TX Shorted	0.5 μ H Max.
RD with RX Shorted	0.5 μ H Max.
Turns Ratio	
TD : TX	1 : 1 (± 2 %)
RD : RX	1 : 1 (± 2 %)
DCR	
TD & RD	1.4 ohm Max.
TX & RX	1.0 ohm Max.
Insertion Loss (TD to TX & RD to RX)	
1-100 MHz	-1.1 dB Max.
Return Loss (TD to TX & RD to RX with 100 ohm load)	
1-40 MHz	-16 dB Min.
40-100 MHz	-10+20*log (f/80 MHz) dB Min.
Cross Talk (Between Each Channel)	
1-60 MHz	-40 dB Min.
60-100 MHz	-35 dB Min.
Common Mode Rejection (TD to TX & RD to RX)	
1-60 MHz	-37 dB Min.
60-100 MHz	-30 dB Min.
Differential to Common Mode Rejection Ratio (TD to TX & RD to RX)	
30 MHz	-35 dB Min.
60 MHz	-35 dB Min.
Hi-Pot (TD to TX & RD to RX @ 1 mA, 60 sec.)	1500 Vrms & 2250 Vdc
Storage Temperature	-40 to +125 °C
Operating Temperature	-40 to +125 °C
Moisture Sensitivity Level	1
ESD Classification (HBM)	N/A

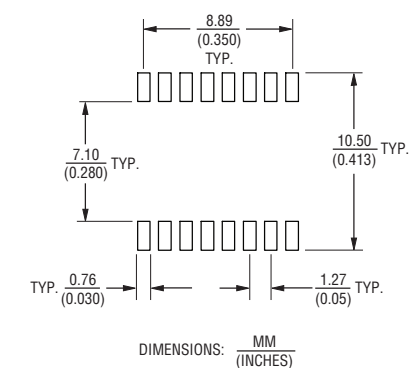
Packaging Specifications

Tape & Reel 600 pcs./reel

Product Dimensions



Recommended Layout



How To Order

Model **SM91074 A L - E**

AEC-Q200 Compliant _____

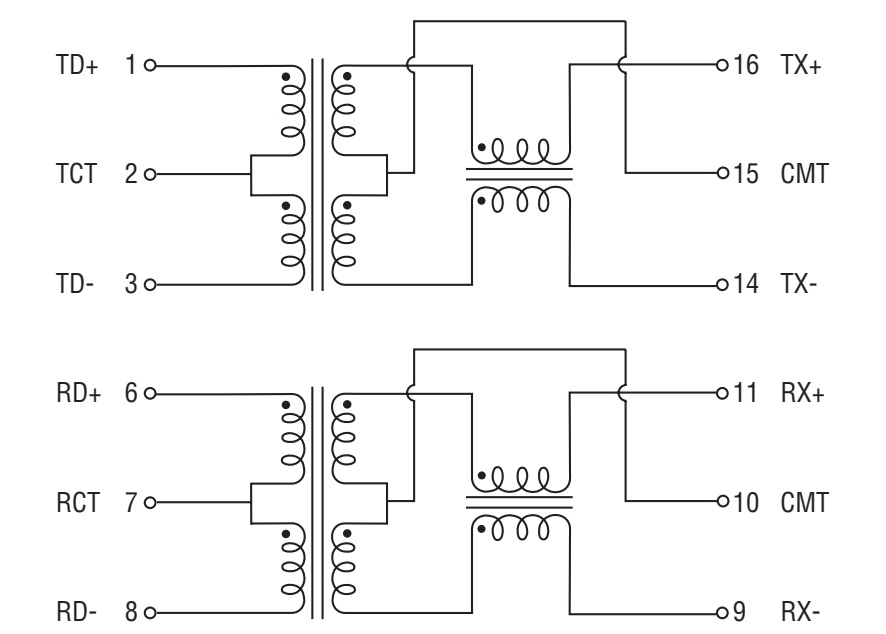
Termination _____

L = Cu/Ni/Sn (RoHS Compliant)

Packaging _____

E = Tape and Reel (600 pcs. per reel)

Electrical Schematic



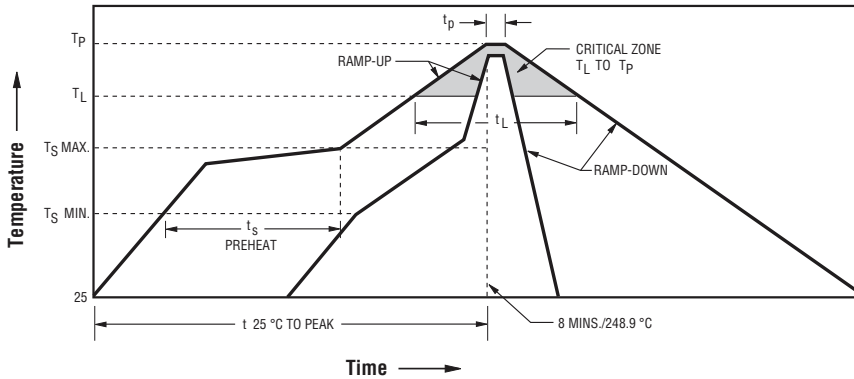
WARNING Cancer and Reproductive Harm - www.P65Warnings.ca.gov

*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. The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at www.bourns.com/docs/legal/disclaimer.pdf.

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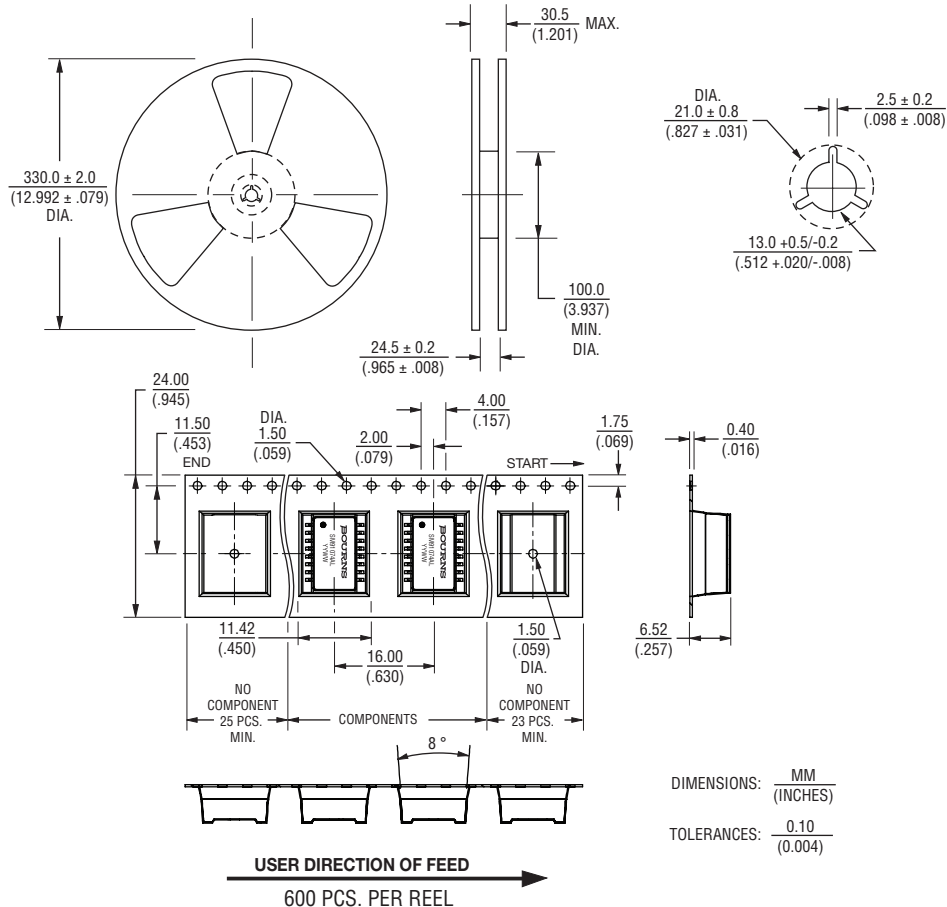
BOURNS®

Solder Profile



Ramp-up rate = 3 °C/sec. max.
 Ramp-down rate = 6 °C/sec. max.
 $T_L = 217\ ^\circ\text{C}$ $t_L = 60\text{-}150\ \text{sec.}$
 $T_P = 250\ ^\circ\text{C} \pm 3\ ^\circ\text{C}$
 Time within 5 °C of actual Peak Temp (t_p) = 20~40 sec.
 $T_{S\ \text{min}} = 150\ ^\circ\text{C}$ $T_{S\ \text{max}} = 200\ ^\circ\text{C}$
 $T_{S\ \text{min}}\ \text{to}\ T_{S\ \text{max}} = 60\text{-}180\ \text{sec.}$
 25 °C to Peak Temperature = 8 min. max.

Packaging Specifications



DIMENSIONS: $\frac{\text{MM}}{\text{(INCHES)}}$
 TOLERANCES: $\frac{\text{MM}}{\text{(0.004)}}$

REV. 11/18

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

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