

Features

- Good performance and cost-effective
- Designed to meet IEEE 802.3u (100 Base-T)
- Expanded temperature range: -40 to +125 °C
- RoHS compliant* and halogen free**
- AEC-Q200 compliant

Additional Information

Click these links for more information:

PRODUCT | TECHNICAL LIBRARY | INVENTORY | SAMPLES | CONTACT

SM91071AL – 10/100 Base-T Transformer

Electrical Specifications @ 25 °C

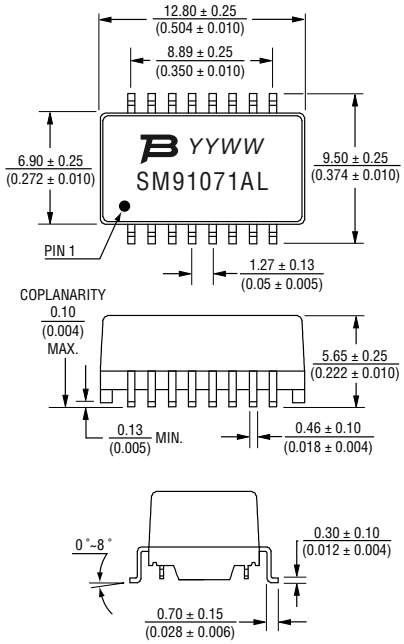
OCL (100 kHz, 0.1 V, 8 mA DC Bias) ..... 350 µH Min.
Leakage Inductance (100 kHz, 0.1 V)
TD with TX Shorted..... 0.5 µH Max.
RD with RX Shorted..... 0.5 µH Max.
Turns Ratio
TD : TX..... 1 : 1 (±2 %)
RD : RX..... 1 : 1 (±2 %)
DCR
TD & RD..... 1.0 ohm Max.
TX & RX..... 1.4 ohm Max.
Insertion Loss (TD to 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
Operating Temperature....-40 to +125 °C
Storage Temperature.....-25 to +85 °C
Moisture Sensitivity Level..... 1
ESD Classification (HBM)..... N/A

Packaging Specifications

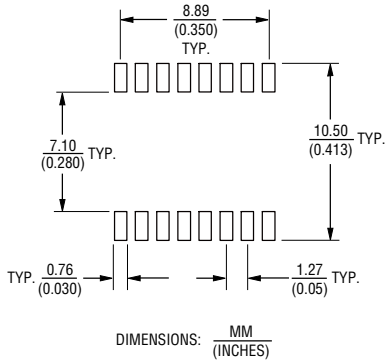
Tape & Reel..... 600 pcs./reel

CALIFORNIA WARNING: Can expose you to lead, a carcinogen and reproductive toxicant.
See www.P65Warnings.ca.gov

Product Dimensions



Recommended Layout

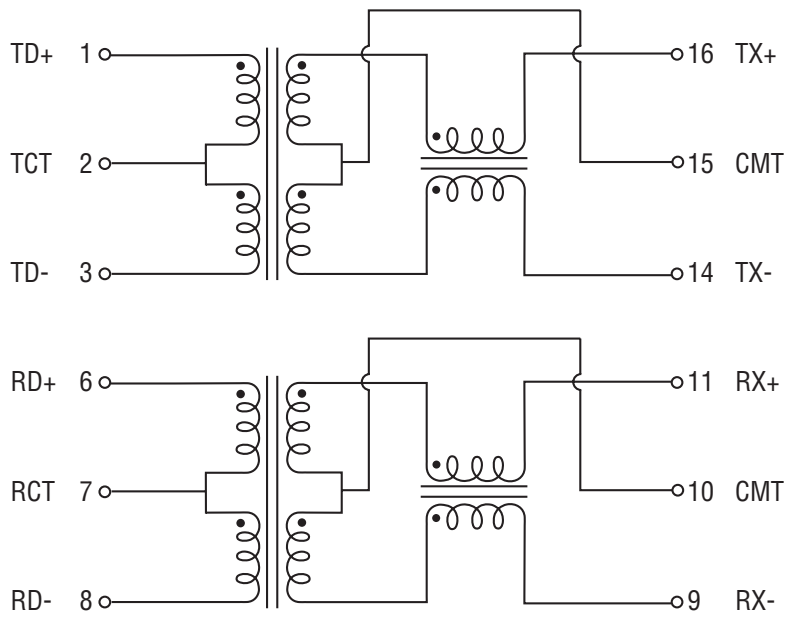


How To Order

SM91071 A L - E

Model
AEC-Q200 Compliant
Termination
L = Cu/Ni/Sn (RoHS Compliant)
Packaging
E = Tape and Reel (600 pcs. per reel)

Electrical Schematic

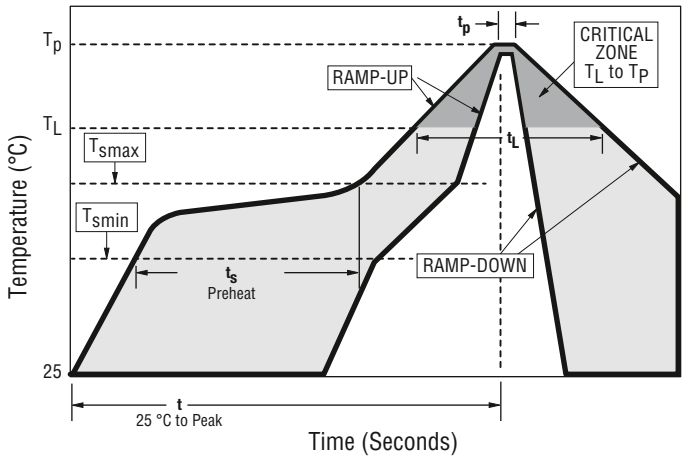


* RoHS Directive 2015/863, Mar 31, 2015 and Annex.
** Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.

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Users should verify actual device performance in their specific applications.
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Solder Profile



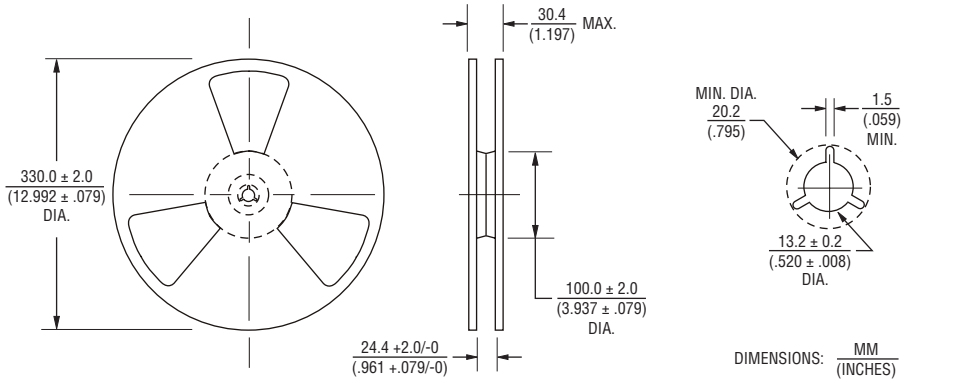
Profile Features	Pb Free Assembly
Average Ramp-up Rate	3 °C/second max.
Preheat	
Temperature min. (T_S min)	150 °C
Temperature max. (T_S max)	200 °C
Time (t_S min. to t_S max.)	60 ~ 180 s
Liquidus Temperature: T_L	217 °C
Time above Liquidus Temperature: t_L	60 ~ 150 s
Peak Temperature: T_P	245-250 °C
Time within 5 °C of Actual Peak Temperature: t_p	20 ~ 40 s
Ramp-down Rate from Peak Temperature	6 °C/s max.
Time 25 °C to Peak: $t_{TO\ PEAK}$	8 minutes max.

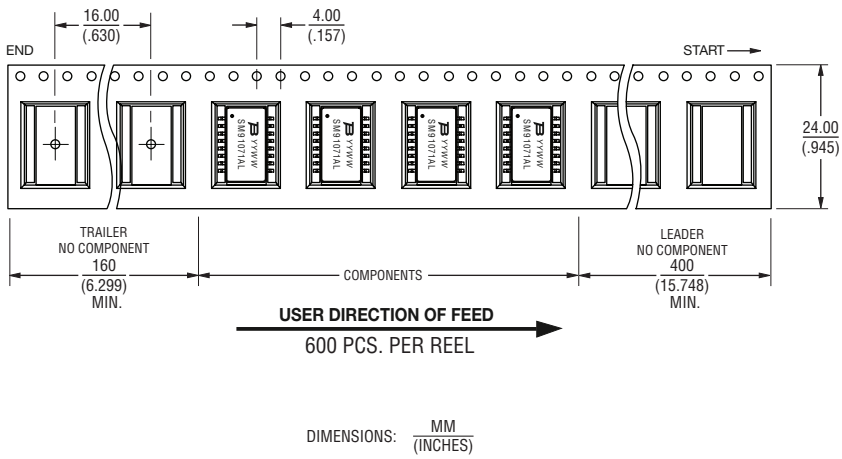
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Packaging Specifications

Specifications and tolerances comply with EIA-481 requirements.





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