



BOURNS®

Features

- Single port Gigabit Ethernet
- Working voltage: 800 V
- Hi-Pot: 4680 VDC
- Design construction: Reinforced insulation per IEC 60664-1 and IEC 62368-1 requirements

- Creepage distance > 8 mm, pollution degree 2, material group CTI I
- Clearance distance > 8 mm, overvoltage category II
- RoHS compliant*

SM91604L LAN Transformer

Additional Information

Click these links for more information:



Electrical Specifications @ 25 °C

OCL (100 kHz / 0.1 V, 8 mA DC Bias)	0.90 Ω max.
(-40 °C to +105 °C)	350 μH min.
Leakage Inductance (100 kHz/0.1 V)	0.35 μH max.
DCR	
Transformer Side	0.90 Ω max.
CM Choke Side	1.30 Ω max.
Turns Ratio	1 : 1 ± 2 %
Insertion Loss	
1~60 MHz	-1.0 dB max.
60~100 MHz	-1.5 dB max.
100~125 MHz	-2.0 dB max.
Return Loss (Z out = 100 Ω)	
1~30 MHz	-13.0 dB min.
30~45 MHz	-10.0 dB min.
45~60 MHz	-8.0 dB min.
60~80 MHz	-6.0 dB min.
80~100 MHz	-5.0 dB min.
100~125 MHz	-4.0 dB min.
Common Mode Rejection	
1~100 MHz	-25.0 dB min.
Cross Talk (Between each channel):	
1 MHz	-58 dB min.
5~100 MHz	-30+20*LOG ₁₀ (f/20 MHz) dB min.
Hi-POT (1 mA, 60 S)	4680 VDC
Working Voltage	up to 800 V
Operating Temperature	
	-40 °C to +125 °C
Storage Temperature (Component)	
	-25 °C to +85 °C
Moisture Sensitivity Level	1
ESD Classification (HBM)	N/A

Packaging Specification

Tape & Reel..... 200 pcs. per 13-inch reel

How To Order

SM91604 L - E

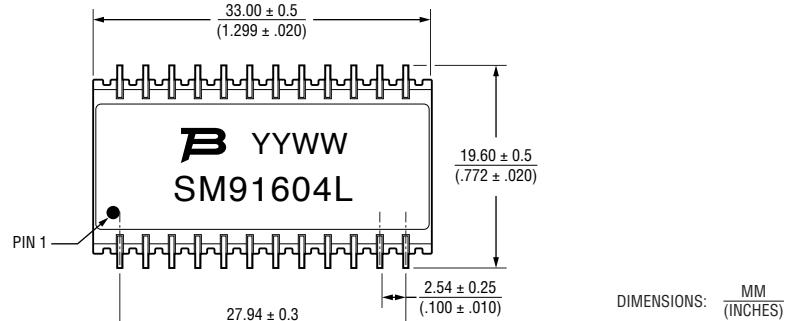
Model _____

RoHS Compliance Designator _____

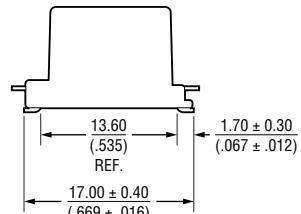
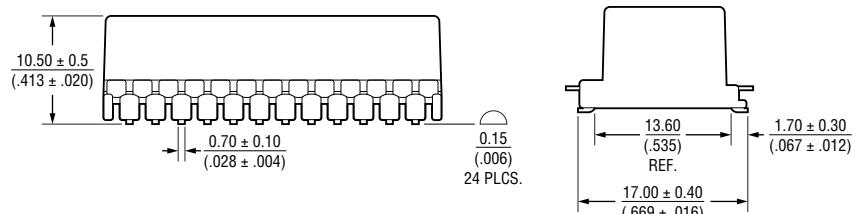
Packaging _____

E = 200 pcs. per 13-inch Reel

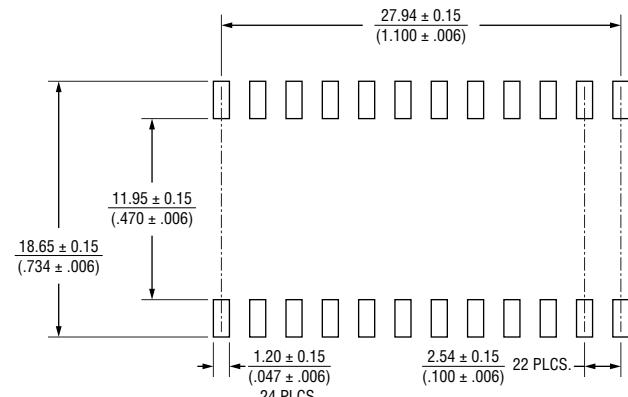
Product Dimensions



DIMENSIONS: MM (INCHES)



Recommended Layout



DIMENSIONS: MM (INCHES)



CALIFORNIA WARNING: Can expose you to lead, a carcinogen and reproductive toxicant.

See www.P65Warnings.ca.gov

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

Specifications are subject to change without notice.

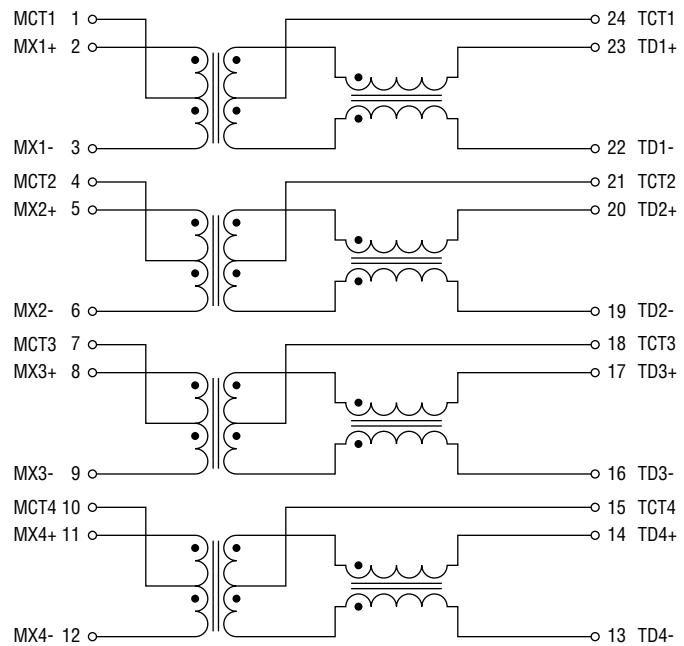
Users should verify actual device performance in their specific applications.

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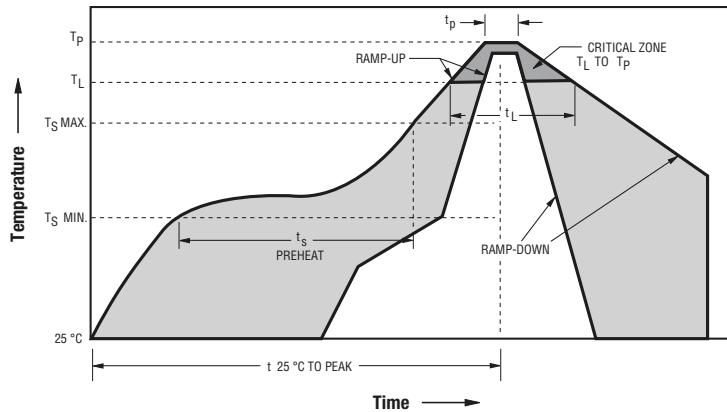
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Electrical Schematic



Reflow Solder Profile



Profile Feature	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 25 °C to Peak Temperature (T_p)	8 minutes max.
Do Not Exceed	250 °C

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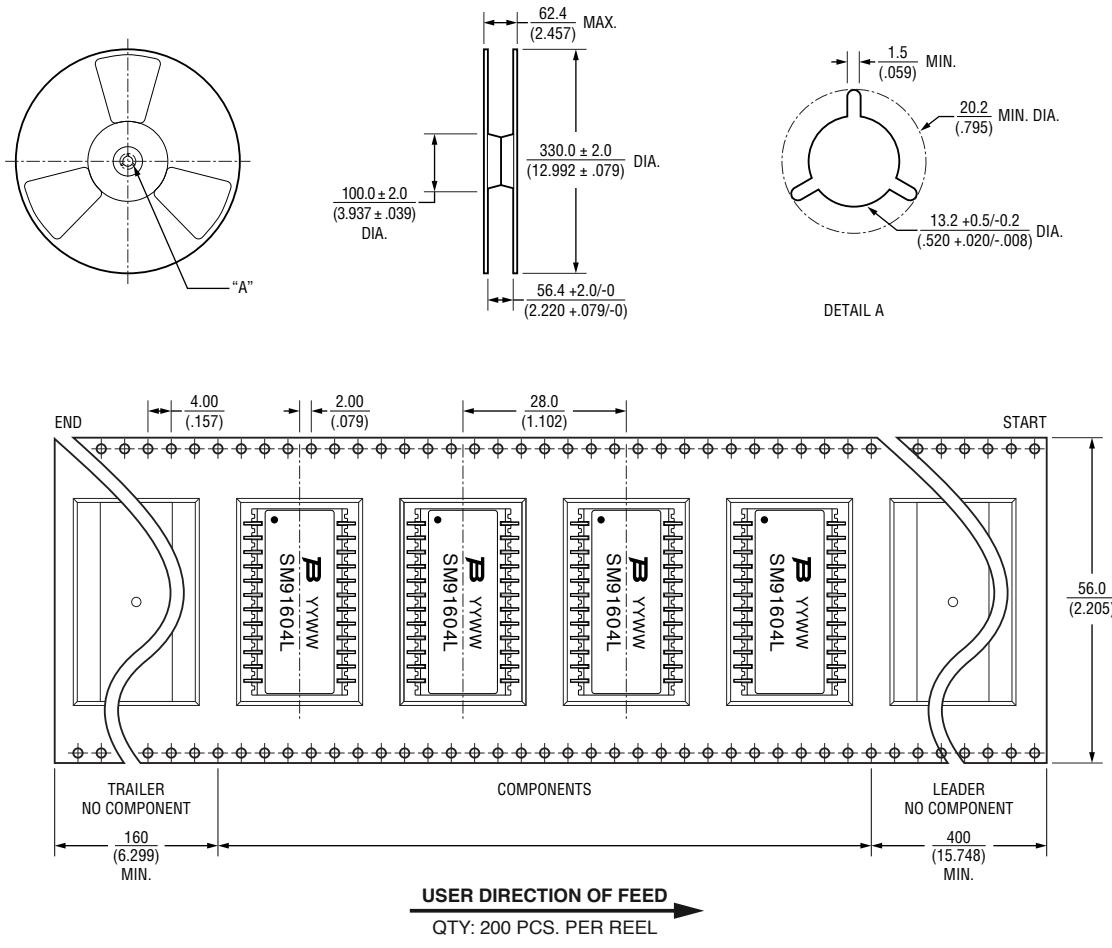
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SM91604L LAN Transformer

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Packaging Specifications

Specifications and tolerances comply with EIA-481 requirements.



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

BOURNS®

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