

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) (-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 +105 °C
Storage Temperature (Component)	
.....	-50 °C to +125 °C
Moisture Sensitivity Level.....	1
ESD Classification (HBM).....	N/A

Packaging Specification

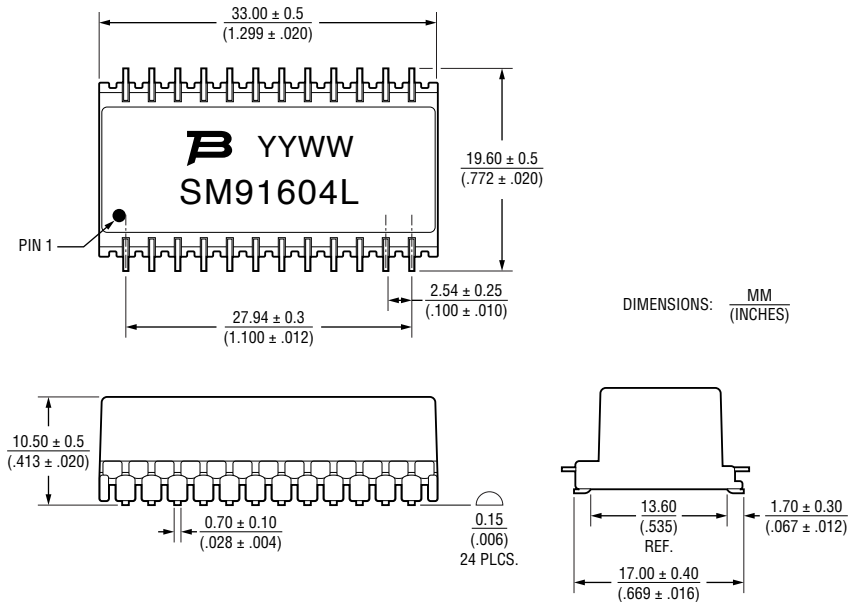
Tape & Reel..... 200 pcs. per 13-inch reel

How To Order

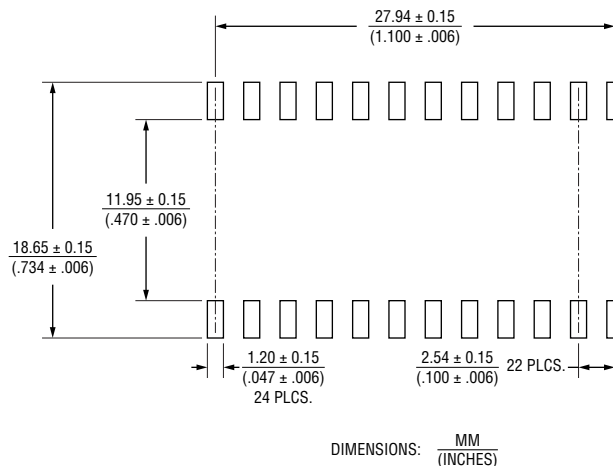
SM91604 L - E

Model _____
 RoHS Compliancy Designator _____
 Packaging _____
 E = 200 pcs. per 13-inch Reel

Product Dimensions



Recommended Layout



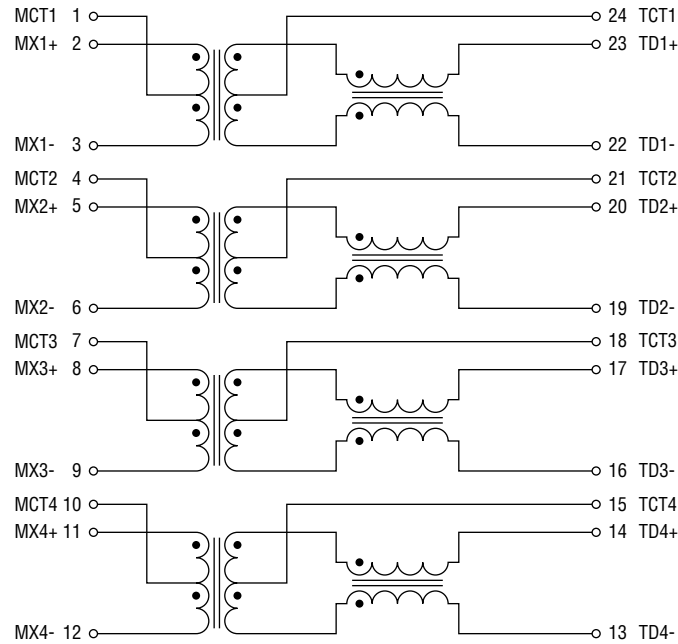
WARNING Cancer and Reproductive Harm - www.P65Warnings.ca.gov

* 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.

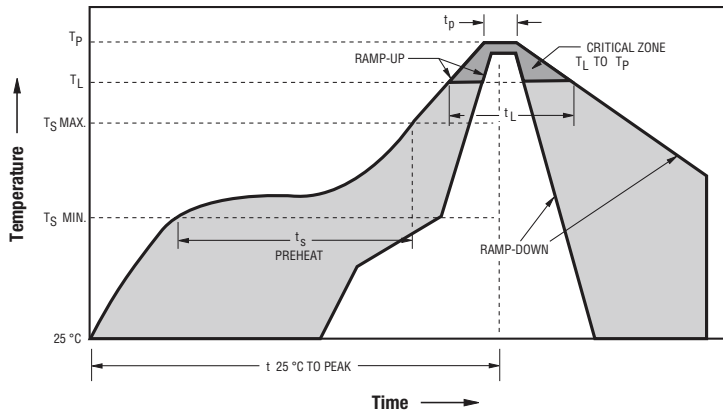
SM91604L LAN Transformer

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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}) Temperature Max. (T _{smax}) Time (T _{smin} to T _{smax})	150 °C 200 °C 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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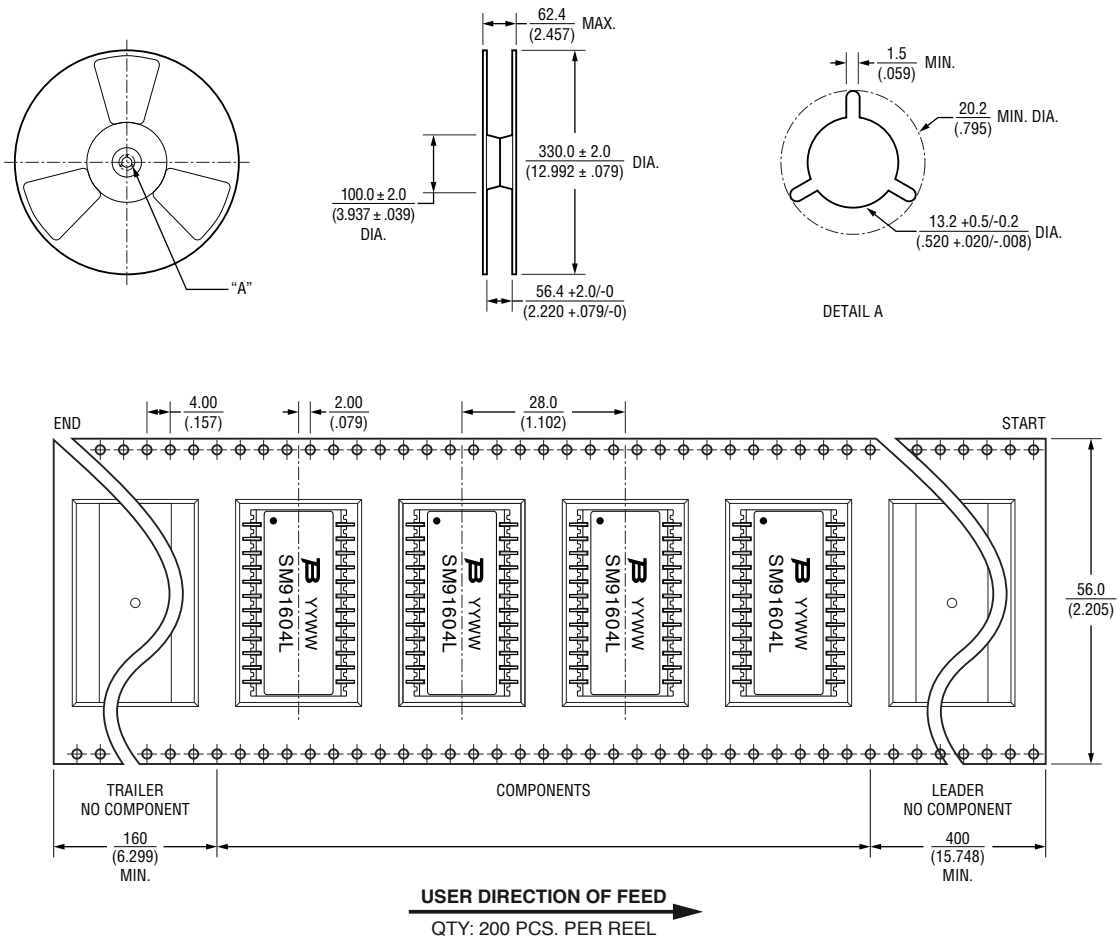
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SM91604L LAN Transformer

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Packaging Specifications

Specifications and tolerances comply with EIA-481 requirements.



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

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