

## Features

- IEC 60335, IEC 60601-1 and IEC 60950-1 compliant
- Supplemental insulation
- 250 Vrms working voltage
- 4000 Vrms isolation voltage
- Expanded temperature range: -40 to +85 °C

- Operating altitude up to 4 km
- RoHS compliant\*

## Applications

- Industrial Ethernet controls
- Ethernet home appliances
- Medical equipment\*\*

# SM13100EL 10/100 Base-T Transformer

### Electrical Specifications @ 25 °C

Inductance (100 kHz, 0.1 V, 8 mADC)	350 $\mu$ H min.
Leakage Inductance (TD & RD - TX & RX shorted, @100 kHz, 0.1 V)	0.5 $\mu$ H max.
DCR (TD & RD)	1200 m $\Omega$ max.
Turns Ratio ( $\pm 3$ %)	
TD : TX	1CT:1CT
RD : RX	1CT:1CT
Insertion Loss (TD to TX & RD to RX, 1-100 MHz)	-2.0 dB max.
Return Loss (TD & TX & RD to RX w/ 100 $\Omega$ Load)	
1-30 MHz	-12 dB min.
30-45 MHz	-10 dB min.
45-60 MHz	-8 dB min.
60-80 MHz	-6 dB min.
Cross Talk (Between Each Channel) 1-100 MHz	-40 dB min.
CMR (TD to TX & RD to RX)	
30 MHz	-40 dB min.
60 MHz	-35 dB min.
100 MHz	-30 dB min.
DCMR (TD to TX & RD to RX) 500k - 100 MHz	-33 dB min.
Hi-Pot (Pri. to Sec.)	4800 VAC, 1 mA or 4000 VAC, 1 mA, 60 sec.
Operating Temperature Range	-40 °C to +85 °C
Storage Temperature Range	-40 °C to +125 °C
Moisture Sensitivity Level	1
ESD Classification (HBM)	N/A

### Packaging Specifications

Tape & Reel ..... 160 pcs./reel

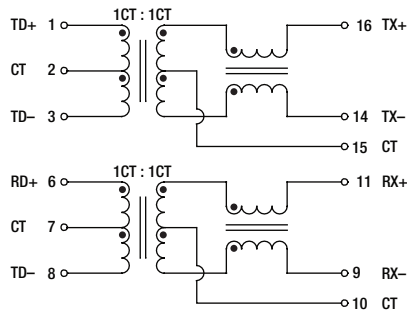
### How To Order

Model **SM13100 E L**

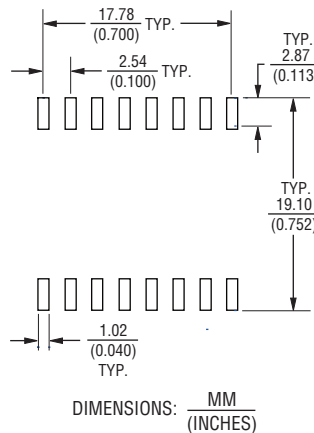
Packaging  
E = Tape and Reel (160 pcs./reel)

Termination  
L = Tin (RoHS Compliant)

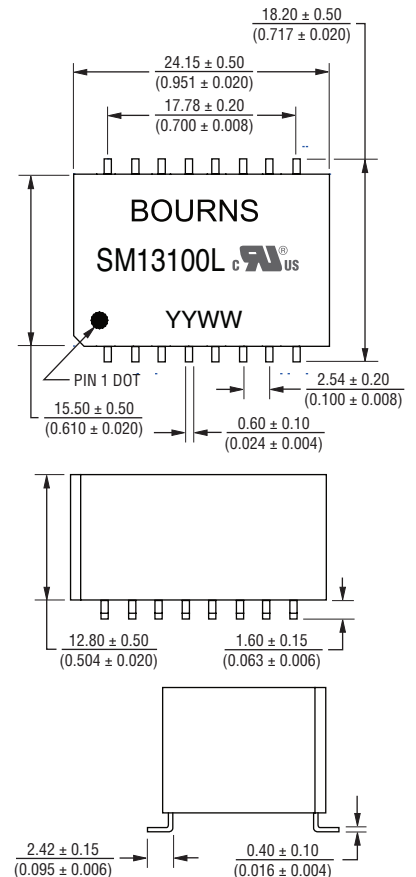
### Electrical Schematic



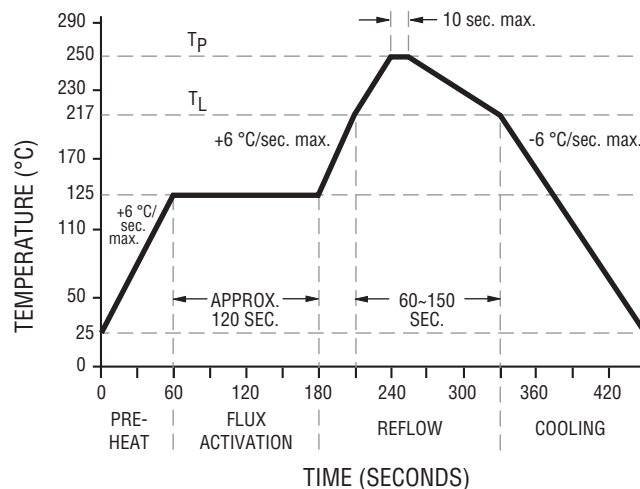
### Recommended Layout



### Product Dimensions



### Solder Profile



\*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.

\*\*Excluding life-saving, life-critical or life-sustaining applications. Specifications are subject to change without notice.

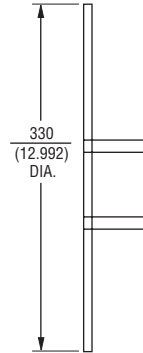
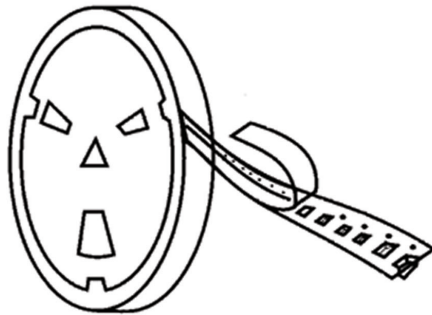
Users should verify actual device performance in their specific applications.

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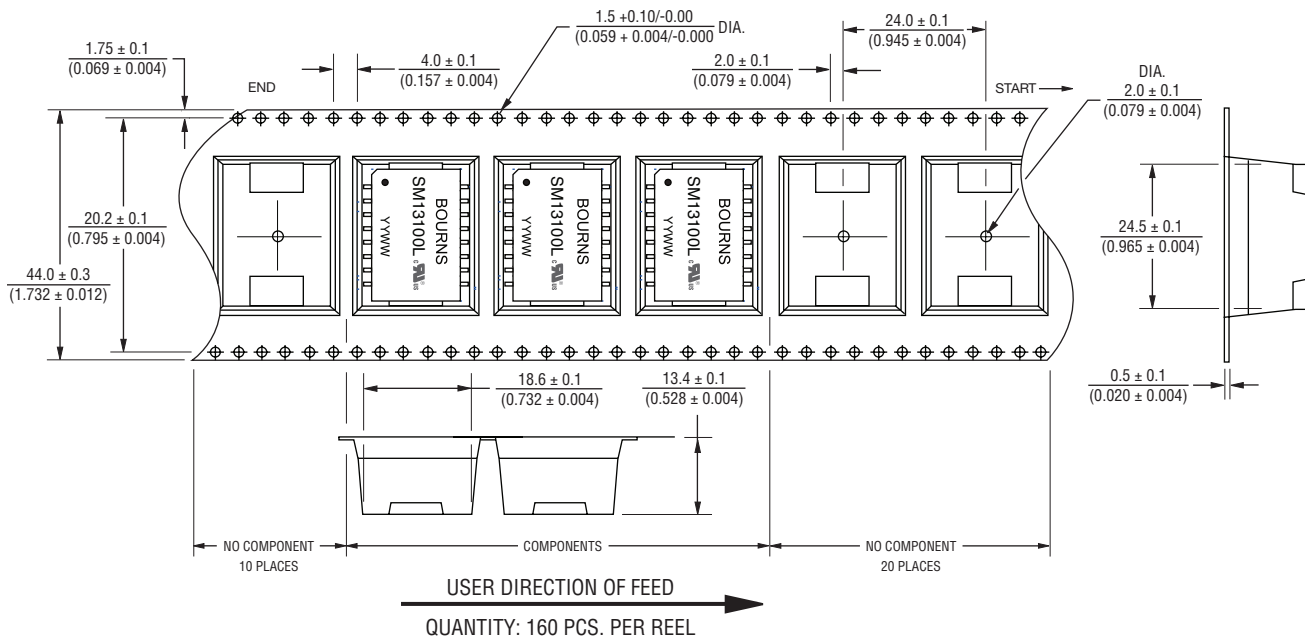
# SM13100EL 10/100 Base-T Transformer

**BOURNS®**

## Packaging Specifications



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



**BOURNS®**

Asia-Pacific: Tel: +886-2 2562-4117 • Email: asiacus@bourns.com

EMEA: Tel: +36 88 520 390 • Email: eurocus@bourns.com

The Americas: Tel: +1-951 781-5500 • Email: americus@bourns.com

[www.bourns.com](http://www.bourns.com)

08/18

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