

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 μ H min. |
| Leakage Inductance (TD & RD - TX & RX shorted, @100 kHz, 0.1 V) | 0.5 μ H max. |
| DCR (TD & RD) | 1200 m Ω max. |
| Turns Ratio (± 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 Ω 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

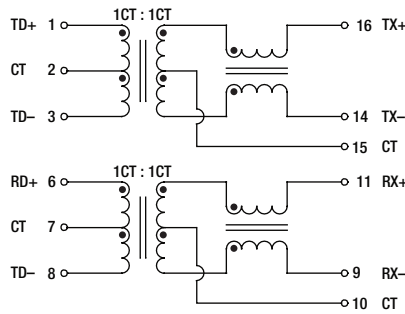
How To Order

Model **SM13100 E L**

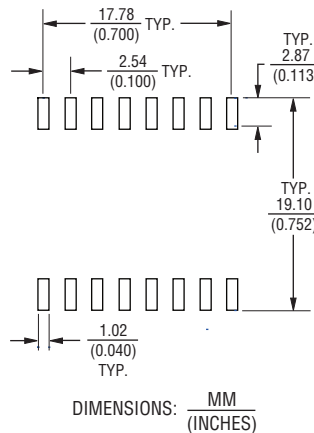
Packaging
E = Tape and Reel (160 pcs./reel)

Termination
L = Tin (RoHS Compliant)

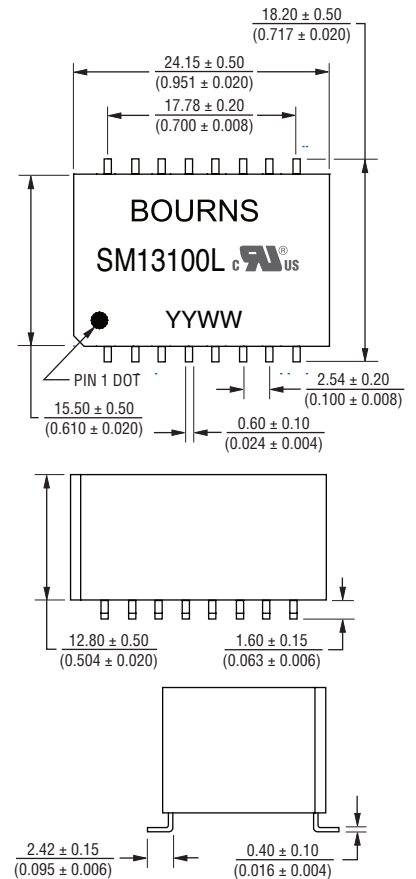
Electrical Schematic



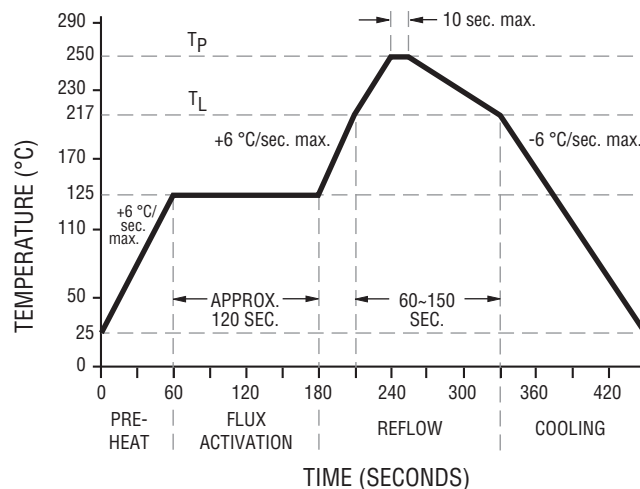
Recommended Layout



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.

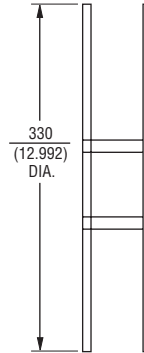
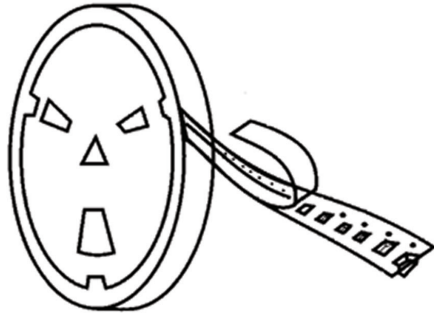
Users should verify actual device performance in their specific applications.

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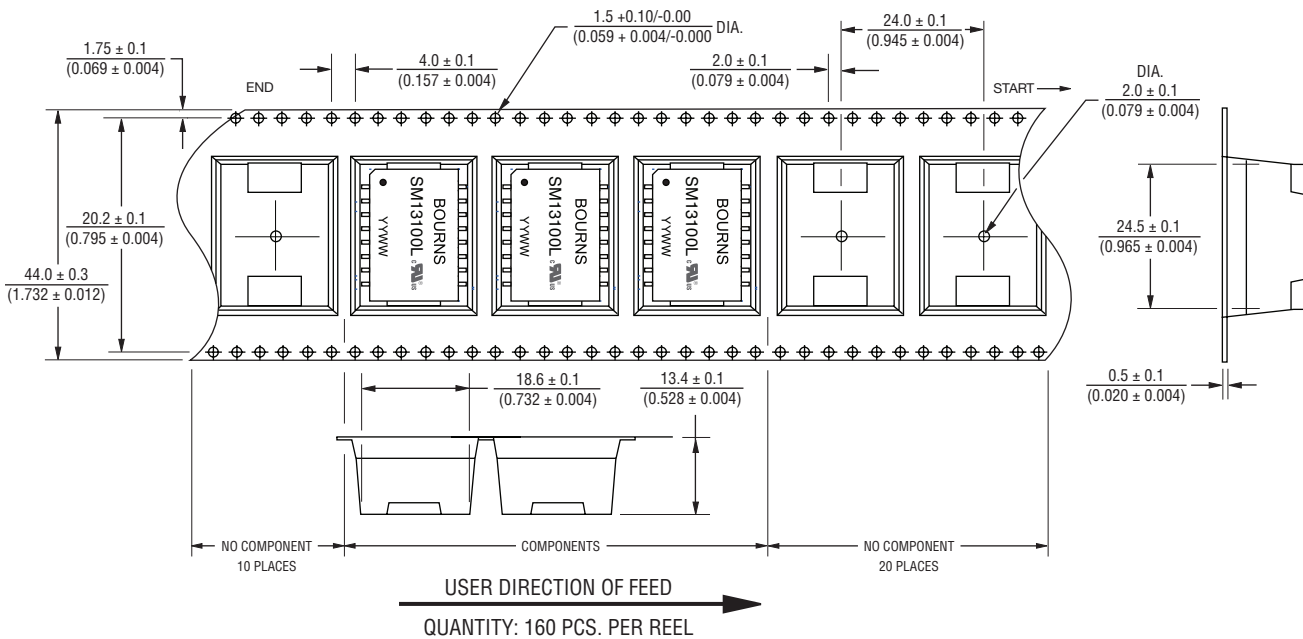
SM13100EL 10/100 Base-T Transformer

BOURNS®

Packaging Specifications



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



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