

Features

- Compliant with IEEE802.3 standards
- Designed for 10/100/1000 Base-T and PoE++
- PoE up to 1.2 ADC per center tap
- RoHS compliant*

Applications

- LAN
- Ethernet
- Power over Ethernet - PoE+

SM51625EL LAN 10/100/1000 Base-T (PoE++) Transformer

Electrical Specifications @ 25 °C

Turns Ratio (TD:MX) $\pm 5\%$ 1CT:1CT
 OCL (@100 kHz, 0.1 V,
 28 mA, DC Bias) 80 μ H min.
 Leakage Inductance (TD, MX Short)
 @ 100 kHz, 0.1 V 0.5 μ H max.
 DCR (TD) 1.4 ohms max.
 C_{ww} (TD to MX) @ 100 kHz, 0.1 V
 25 pF typ.
 Hi-Pot (Pri to Sec) 1500 V_{rms}, 1 mA,
 60 seconds

Insertion Loss (TD:MX)
 0.3 to 1 MHz -1.1 dB max.
 1 to 65 MHz -0.8 dB max.
 65 to 100 MHz -1 dB max.

Return Loss (TD, MX w/100 Ω load)
 1 to 40 MHz -16 dB min.
 40 to 100 MHz -10+20*Log₁₀
 (f/80 MHz) dB min.

Cross Talk (Between Each Channel)
 1 to 30 MHz -41 dB min.
 30 to 60 MHz -37 dB min.
 60 to 100 MHz -33 dB min.

Common Mode Rejection (TD:MX)
 0.3 to 100 MHz -30 dB min.

PoE++ Current
 Up to 1.2 ADC per center tap

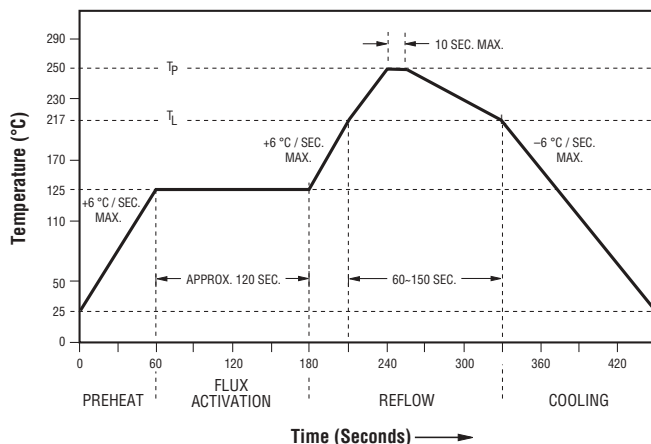
Operating Temperature Range
 -40 °C to +85 °C

Storage Temperature Range
 -55 °C to +125 °C

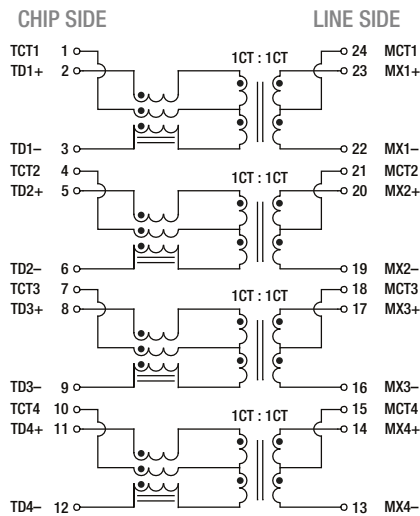
Packaging Specifications

Tape & Reel 350 pcs./reel

Reflow Solder Profile



Electrical Schematic



How To Order

Model SM51625 E L

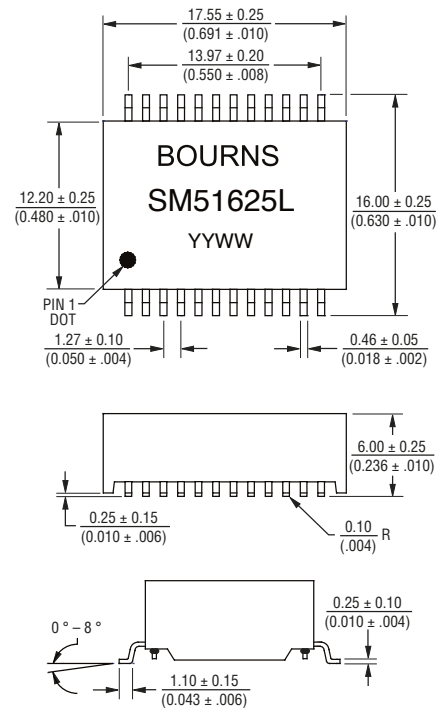
Packaging _____
 E = Tape and Reel (350 pcs./reel)

Termination _____
 L = Tin (RoHS Compliant)

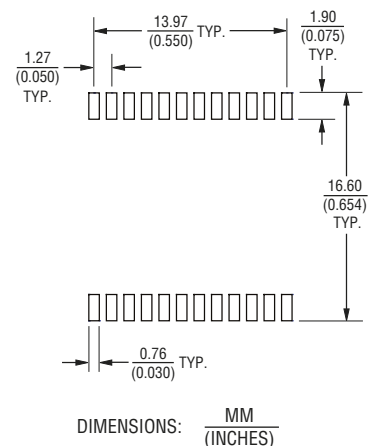
Environmental Specifications

Moisture Sensitivity Level 1
 ESD Classification (HBM) N/A

Product Dimensions



Recommended Layout



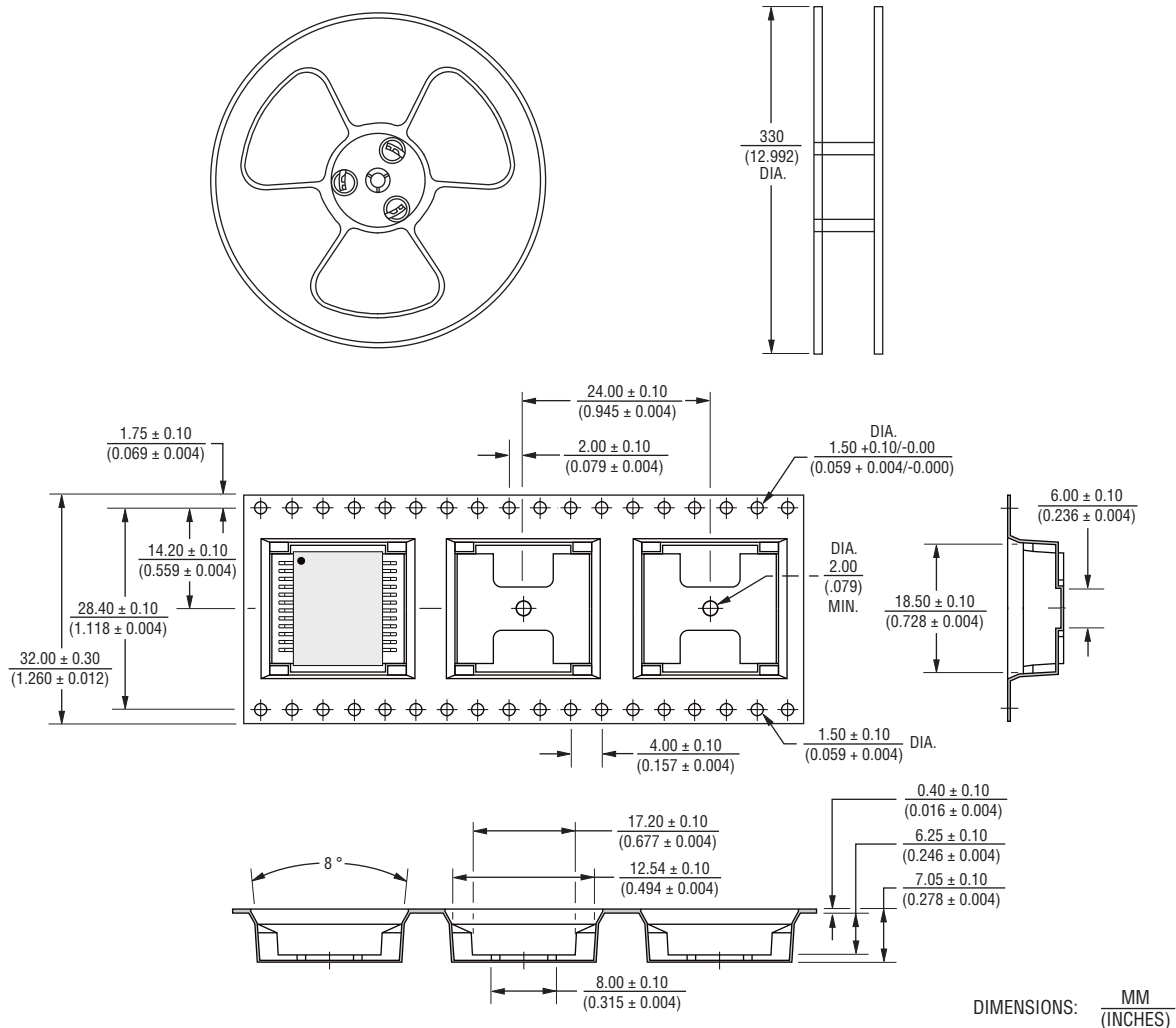
WARNING Cancer and Reproductive Harm
www.P65Warnings.ca.gov

*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.
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SM51625EL LAN 10/100/1000 Base-T (PoE+) Transformer

BOURNS®

Packaging Specifications



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REV. 05/18

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