

## Features

- Compliant with IEEE802.3 standards
- Designed for 10/100/1000 Base-T and PoE
- 5K VAC dielectric withstanding voltage
- RoHS compliant\*

## Applications

- LAN
- Ethernet
- Power over Ethernet - PoE

## SM51589L LAN 10/100/1000 Base-T Transformer (PoE) Modules

### Electrical Specifications @ 25 °C

Turns Ratio TX/RX.....	1CT:1CT
Cross Talk	
30 MHz.....	45 dB min.
60 MHz.....	40 dB min.
80 MHz.....	35 dB min.
Insertion Loss	
1-100 MHz.....	-1.0 dB max.
Return Loss (@ 100 Ohms)	
1-30 MHz.....	18 dB min.
40 MHz.....	14.4 dB min.
50 MHz.....	13.1 dB min.
60-80 MHz.....	12 dB min.
100 MHz.....	10 dB min.
PRI OCL (@100 KHz,	
0.1 V, 8 mA, DC Bias) .....	350 µH min.
DCMR	
30 MHz.....	43 dB min.
60 MHz.....	37 dB min.
80 MHz.....	33 dB min.
PoE Current.....	Up to 600 mADC
	for 1000 Base-T
Isolation Hi-Pot .....	5000 VAC, 1 mA,
	2 seconds
Operating Temperature	
.....	-40 °C to +85 °C

### Packaging Specifications

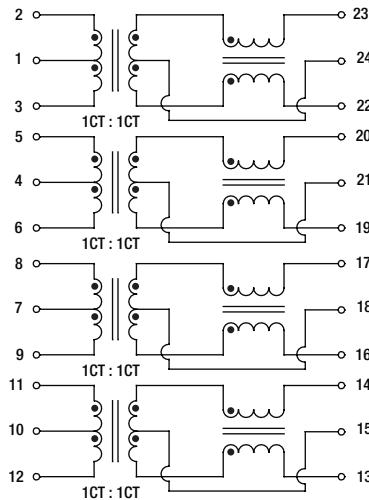
Tape & Reel..... 400 pcs./reel

### How To Order

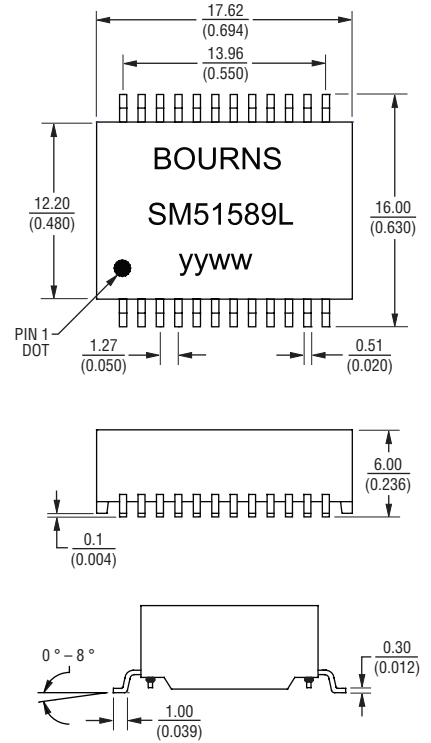
**SM51589E L**

Model \_\_\_\_\_  
 Termination \_\_\_\_\_  
 L = Tin only (RoHS compliant)

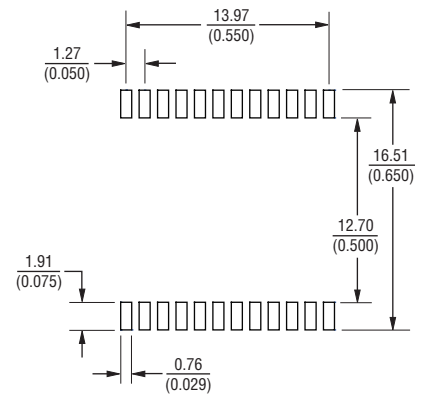
### Electrical Schematic



### Product Dimensions



### Recommended Layout



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

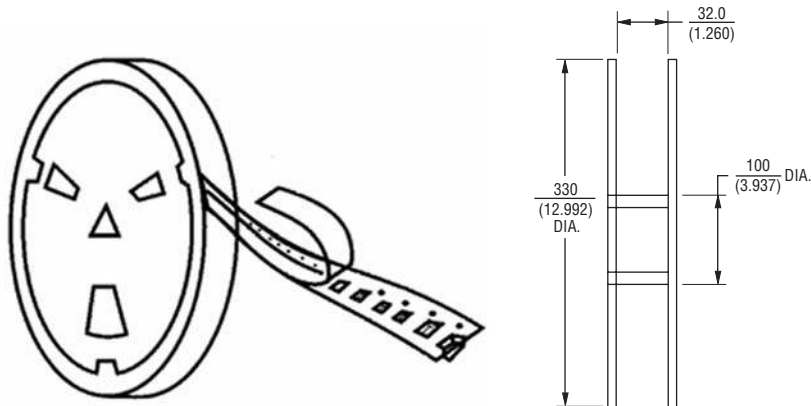
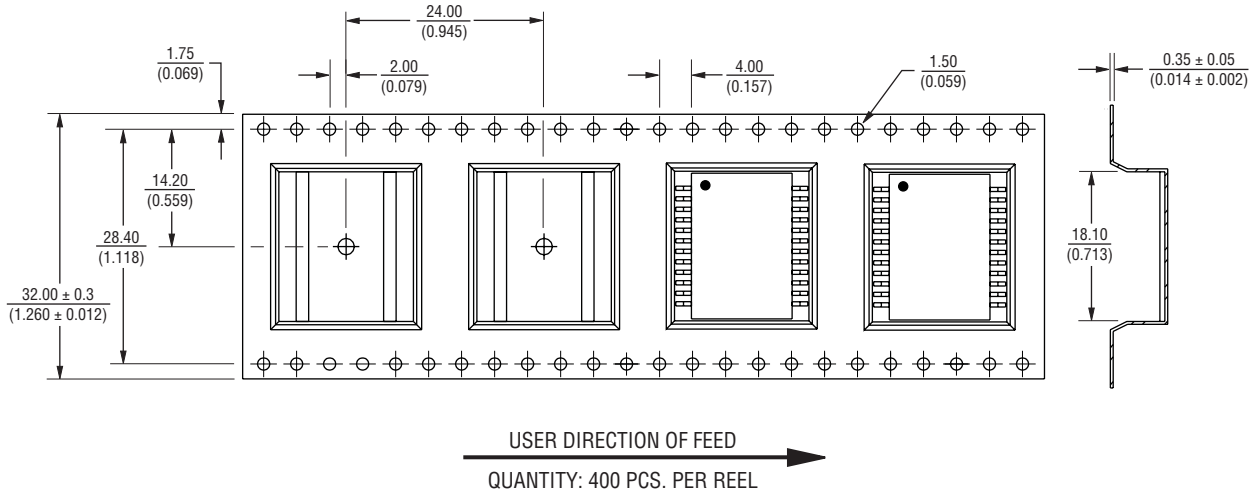
TOLERANCES:  $\pm \frac{0.25}{(.010)}$

\*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.  
 Specifications are subject to change without notice.  
 Customers should verify actual device performance in their specific applications.

# SM51589L LAN 10/100/1000 Base-T Transformer (PoE) Modules



## Packaging Specifications



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



Asia-Pacific: Tel: +886-2 2562-4117 • Fax: +886-2 2562-4116

Europe: Tel: +41-41 768 5555 • Fax: +41-41 768 5510

The Americas: Tel: +1-951 781-5500 • Fax: +1-951 781-5700

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

REV. 06/12

Specifications are subject to change without notice.  
Customers should verify actual device performance in their specific applications.