

## Features

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



Model SM51589L is obsolete and not recommended for new designs. Model SM51589PEL is a suggested alternative - see data sheet for specifications.

## 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

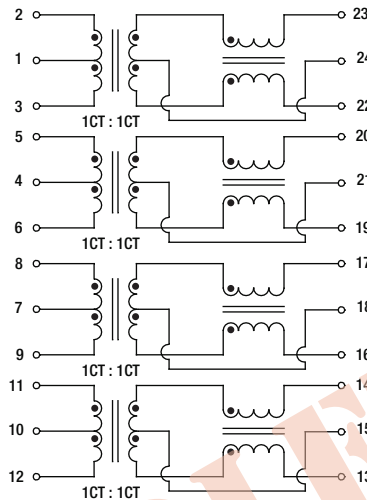
Tape & Reel..... 400 pcs./reel

### How To Order

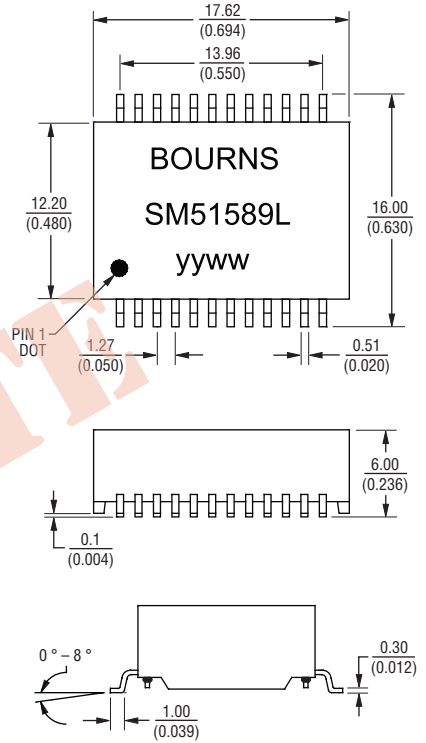
**SM51589E L**

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

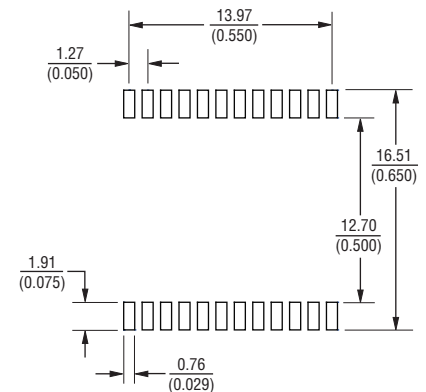
### Electrical Schematic



### 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.

The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time. Users should verify actual device performance in their specific applications.

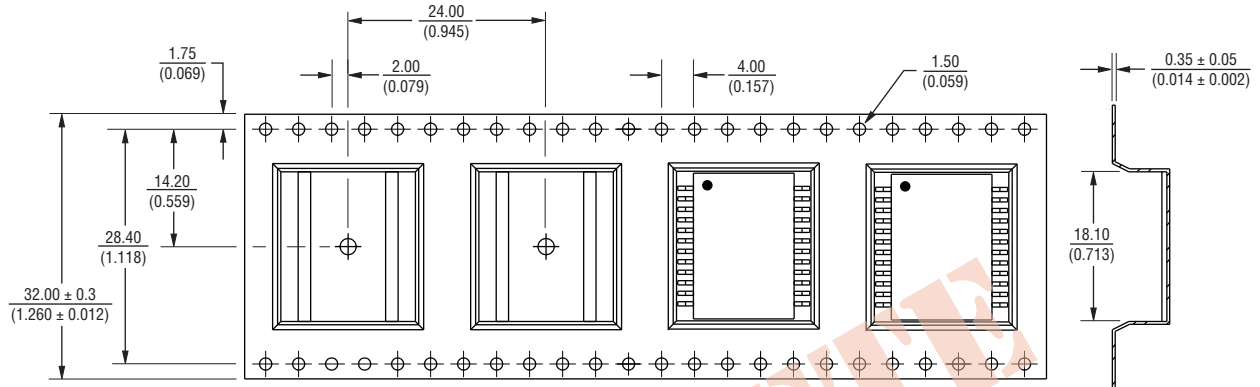
## Applications

- LAN
- Ethernet
- Power over Ethernet - PoE

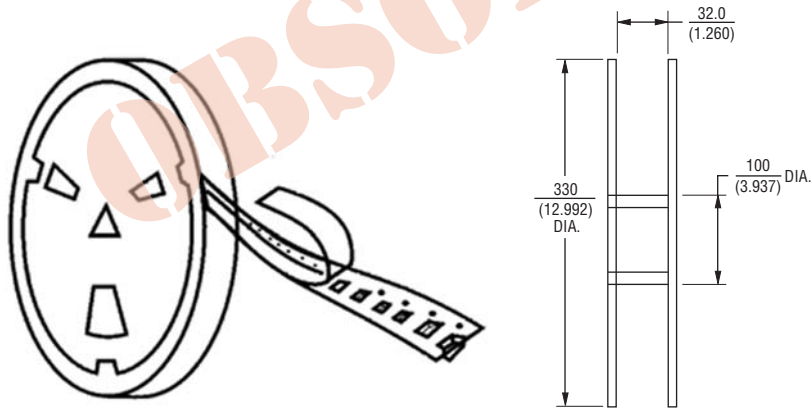
## SM51589L LAN 10/100/1000 Base-T Transformer (PoE) Modules

**BOURNS®**

### Packaging Specifications



USER DIRECTION OF FEED  
 QUANTITY: 400 PCS. PER REEL



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

**BOURNS®**

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

EMEA: Tel: +36 88 520 390 • Fax: +36 88 520 211

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

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

REV. 04/15

Specifications are subject to change without notice.  
 The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.  
 Users should verify actual device performance in their specific applications.