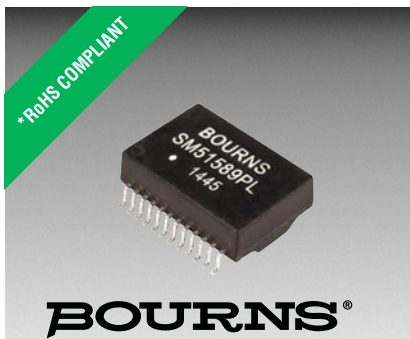




## Features

- 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

## SM51589PEL LAN 10/100/1000 Base-T Transformer (PoE) Modules

### Electrical Specifications @ 25 °C

|                                         |                              |
|-----------------------------------------|------------------------------|
| Turns Ratio ( $\pm 5\%$ )               | 1CT:1CT                      |
| OCL (@100 kHz,<br>0.1 V, 8 mA, DC Bias) | 350 $\mu$ H min.             |
| Leakage Inductance<br>(@100 kHz, 0.1 V) | 0.5 $\mu$ H max.             |
| Isolation Hi-Pot                        | 5000 VAC, 1 mA,<br>2 seconds |
| 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.                  |
| Cross Talk                              |                              |
| 30 MHz                                  | -45 dB min.                  |
| 60 MHz                                  | -40 dB min.                  |
| 80 MHz                                  | -35 dB min.                  |
| DCMR                                    |                              |
| 30 MHz                                  | -43 dB min.                  |
| 60 MHz                                  | -37 dB min.                  |
| 80 MHz                                  | -33 dB min.                  |
| PoE Current                             | Up to 720 mADC               |
| Operating Temperature Range             | -40 °C to +85 °C             |
| Storage Temperature Range               | -25 °C to +125 °C            |

### Packaging Specifications

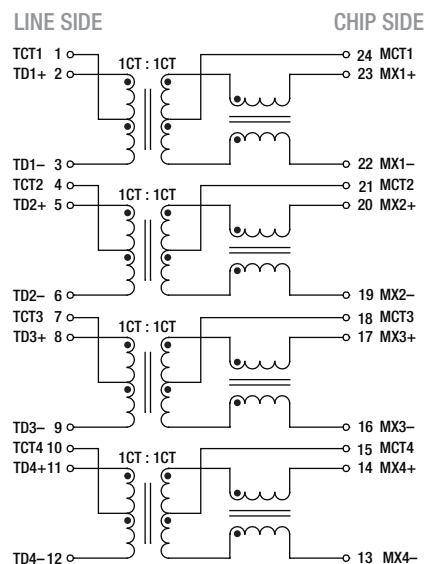
Tape & Reel ..... 400 pcs./reel

### How To Order

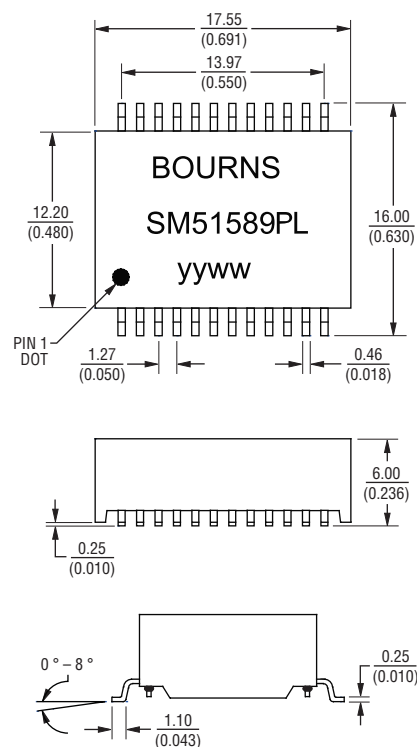
**SM51589 P E L**

Model \_\_\_\_\_  
 Construction \_\_\_\_\_  
     P = Potted  
 Packaging \_\_\_\_\_  
     E = Tape and Reel (400 pcs./reel)  
 Termination \_\_\_\_\_  
     L = Tin (RoHS Compliant)

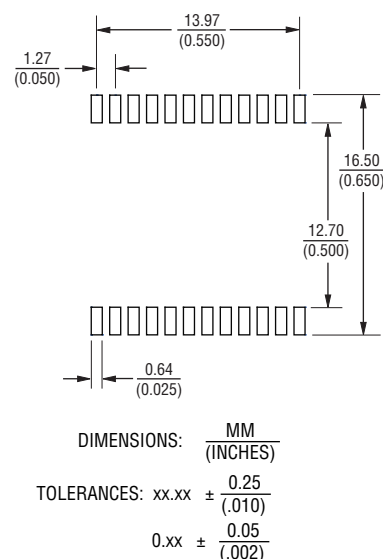
### Electrical Schematic



### Product Dimensions



### Recommended Layout



\*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.

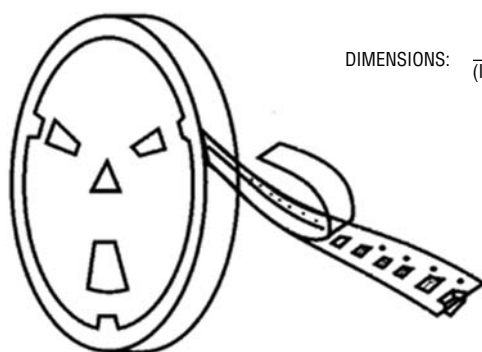
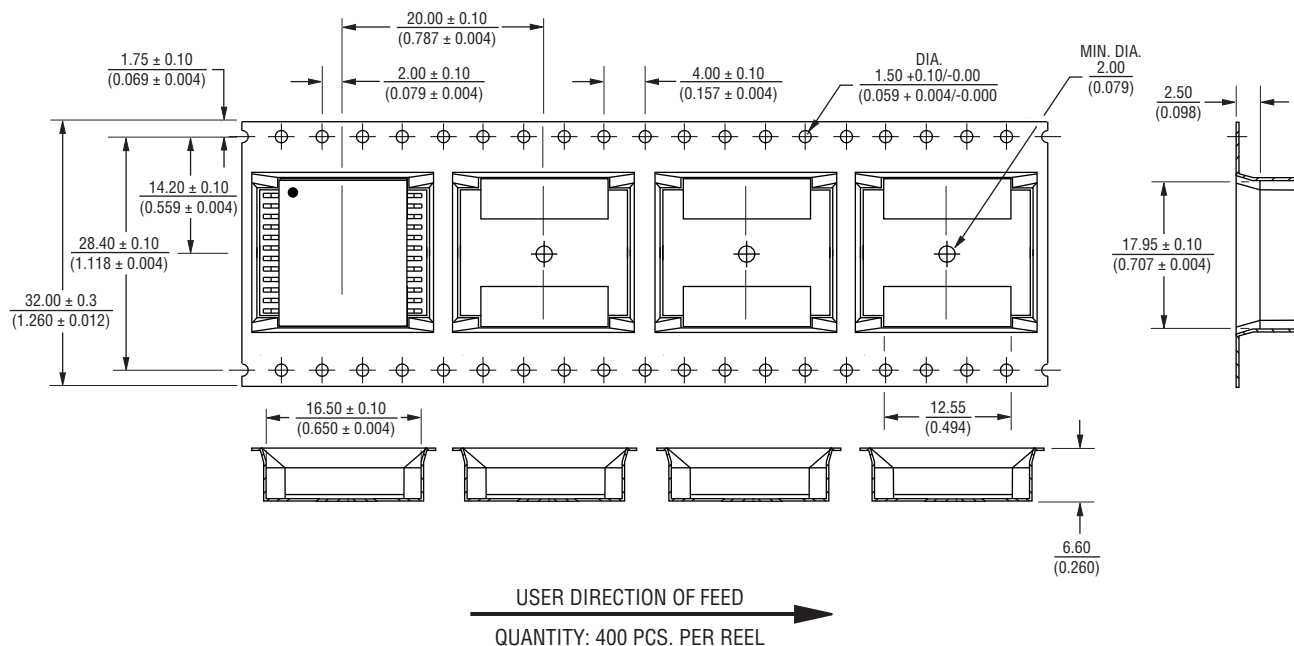
The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.

Users should verify actual device performance in their specific applications.

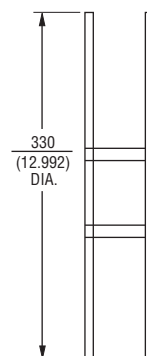
# SM51589PEL LAN 10/100/1000 Base-T Transformer (PoE) Modules

**BOURNS®**

## Packaging Specifications



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

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