

## Features

- Compliant with IEEE 802.3 standards
- Designed for 10/100/1000 Base-T full duplex
- Supports four pairs of Category 5 UTP cables
- Extended operating temperature range
- RoHS compliant\*

## Applications

- Ethernet

# PT61022XL 10/100/1000 Base-T Transformer

### Electrical Specifications @ 25 °C

Turns Ratio (±5 %)	.....1CT*:1CT*
Inductance	.....350 $\mu$ H min. @ 100 KHz, 0.1 Vrms, 8 mA DC Bias
Leakage Inductance	.....0.5 $\mu$ H max. @ 100 KHz, 0.1 Vrms
C <sub>ww</sub>	.....25 pF typ. @ 100 KHz, 0.1 Vrms
DCR	.....0.9 $\Omega$ max.
Insertion Loss	0.3-100 MHz .....-1.1 dB max.
Return Loss	0.3-30 MHz .....-18 dB min.
	30-60 MHz .....-14 dB min.
	60-80 MHz .....-12 dB min.
	80-100 MHz .....-10 dB min.
Common Mode Rejection	0.3-60 MHz .....-35 dB Min.
	60-100 MHz .....-30 dB Min.
Crosstalk	0.3-60 MHz .....-35 dB Min.
	60-100 MHz .....-28 dB Min.
Hipot	1 mA, 60 sec. ....1500 Vrms
Operating Temperature	.....-40 °C to +85 °C
Storage Temperature	.....-40 °C to +125 °C

\*CT: Center tap

### Material

Terminal Finish ..... Tin

### Packaging Specifications

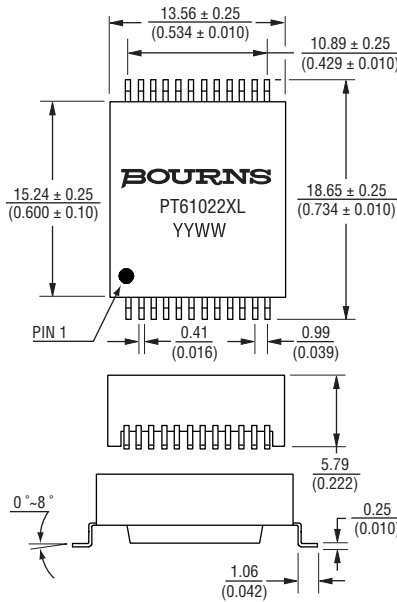
Tape & Reel ..... 500 pcs./reel

### How To Order

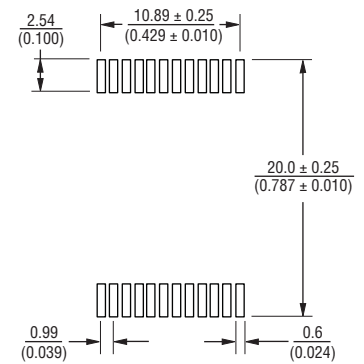
**PT61022 X E L**

Model	_____
Type	_____
	X = Extended Temperature Range
Packaging	_____
	E = Tape and Reel (500 pcs./reel)
Termination	_____
	L = Tin only (RoHS Compliant)

### Product Dimensions



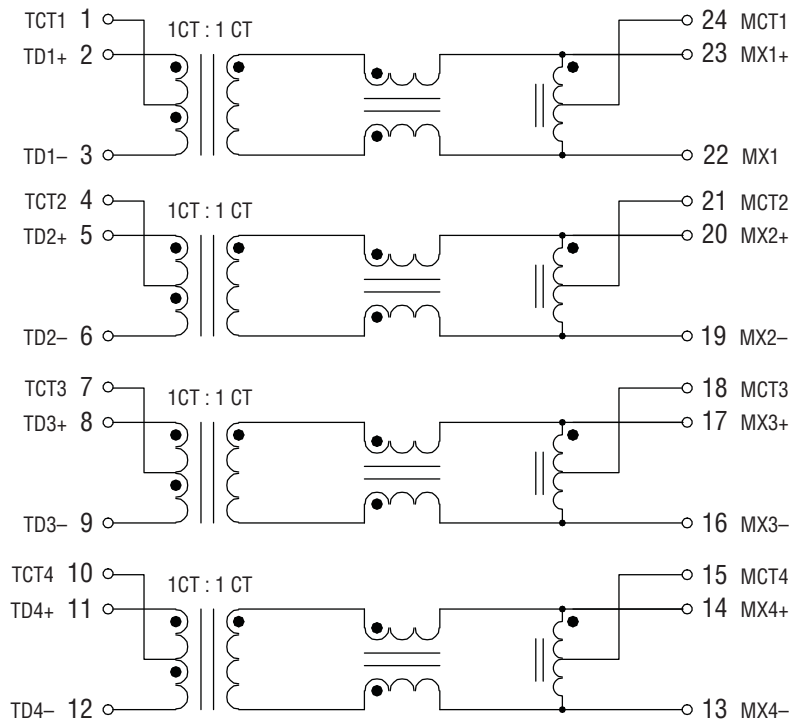
### Recommended Layout



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

TOLERANCES:  $\frac{0.05}{(0.002)}$  UNLESS OTHERWISE NOTED

### Electrical Schematic



\*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.

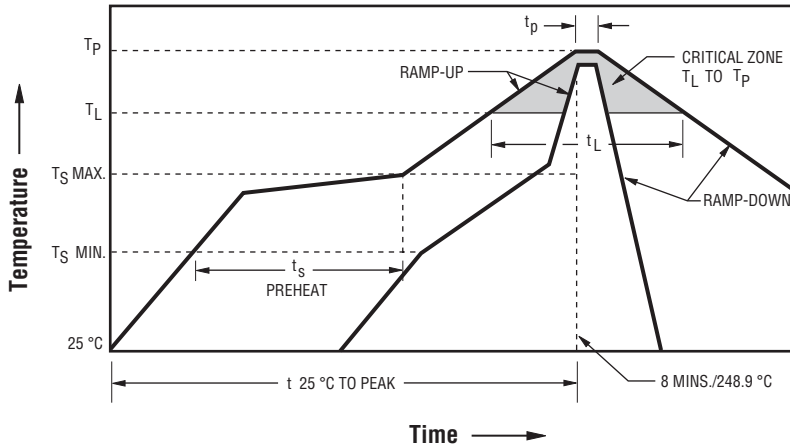
The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.

Users should verify actual device performance in their specific applications.

# PT61022XEL 10/100/1000 Base-T Transformer

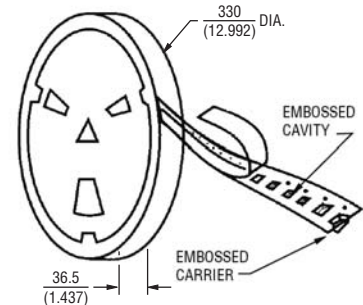
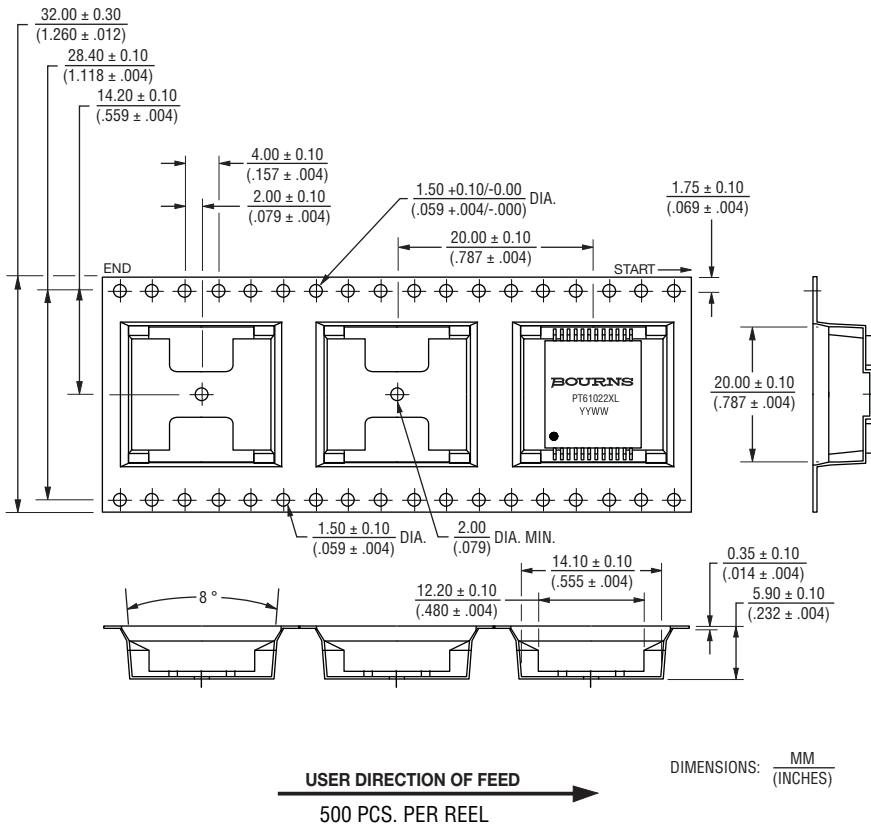
**BOURNS®**

## Soldering Profile



Ramp up rate =  $3^\circ\text{C}/\text{second}$  max.  
 Ramp down rate =  $6^\circ\text{C}/\text{second}$  max.  
 $T_L = 217^\circ\text{C}$   
 $t_L = 60$  seconds to 150 seconds  
 $T_P = 250 \pm 3^\circ\text{C}$   
 Time within  $5^\circ\text{C}$  of Actual Peak Temperature ( $t_p$ ) = 20-40 seconds  
 $T_S \text{ min} = 150^\circ\text{C}$   
 $T_S \text{ max} = 200^\circ\text{C}$   
 $T_S \text{ min to } T_S \text{ max} = 60$  seconds to 180 seconds  
 $25^\circ\text{C}$  to Peak Temperature = 8 minutes max.

## Packaging Specifications



**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)