

## Features

- Compliant with IEEE802.3ab Draft Standards for 1000 Base-T
- Designed for Long Haul Gigabit Ethernet 10/100/1000 Base-T Full Duplex applications
- Low profile surface mount packaging designed for reflow process (245 ° peak)
- Supports 4 pairs of Category 5 UTP cables

- RoHS compliant\*

## Applications

- LAN
- Ethernet

# PT61020EL LAN 10/100/1000 Base-T Transformer Modules

### Electrical Specifications @ 25 °C

Inductance.....	350 $\mu$ H min.
with 8 mA DC bias @ 100 KHz, 0.2 V	
Leakage Inductance.....	0.50 $\mu$ H max.
@ 100 KHz, 0.2 V	
Interwinding Capacitance.....	25 pF typ.
@ 100 KHz, 0.2 V	
DC Resistance.....	0.90 $\Omega$ max.
Insertion Loss.....	0.3-100 MHz
	-1.1 dB max.
Return Loss (dB min.)	
0.3-30 MHz.....	-18
40 MHz.....	-14.4
50 MHz.....	-13.1
60-80 MHz.....	-12
Cross Talk (dB min.)	
0.3-30 MHz.....	-35
60-100 MHz.....	-28
Common Mode Rejection (dB min.)	
0.3-30 MHz.....	-40
60 MHz.....	-35
80-100 MHz.....	-30
Turns Ratio.....	1 CT:1 $\pm$ 5 %
PoE+ Current	
.....	Up to 650 mA for 1000 Base-T
Isolation Hi-Pot.....	1500 VAC 1 mA 1 sec.
Operating Temperature	
.....	-40° C to +85 °C

PT61020EL is the extended temperature version of PT61024L.

### Environmental Specifications

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

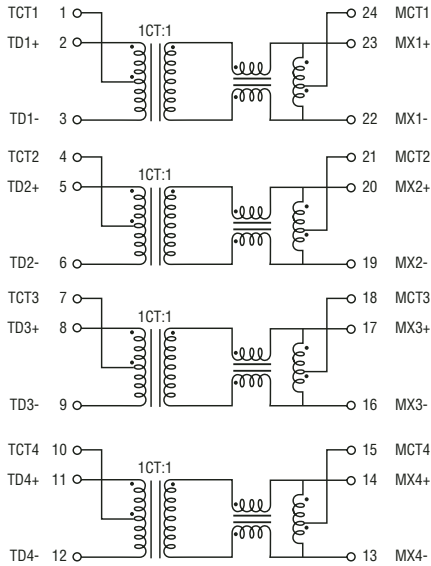
### Packaging Specifications

Tape & Reel..... 350 pcs./reel

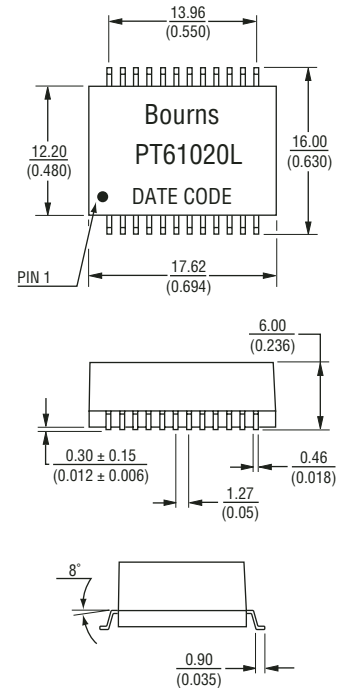
### How To Order

Model **PT61020E** L  
 Termination \_\_\_\_\_  
 L = Tin only (RoHS Compliant)

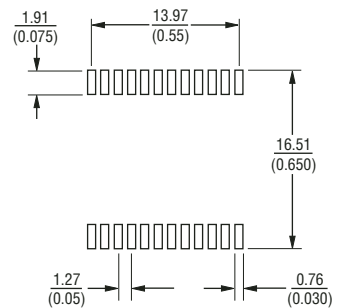
### Electrical Schematic



### Product Dimensions



### Recommended Layout



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

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



**WARNING Cancer and Reproductive Harm - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)**

\*RoHS Directive 2015/863, Mar 31, 2015 and Annex.  
 Specifications are subject to change without notice.

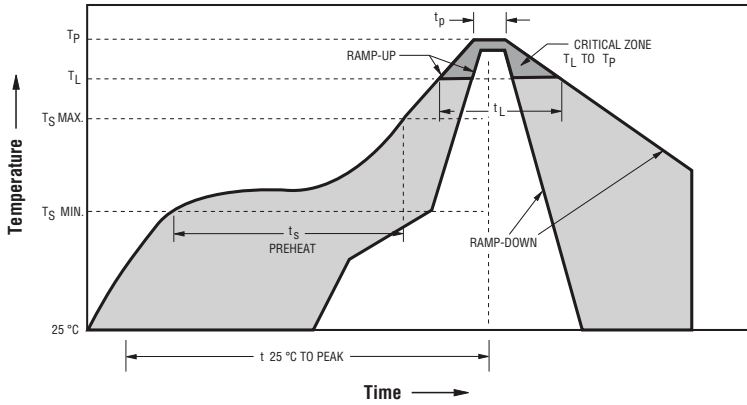
Users should verify actual device performance in their specific applications.

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# PT61020EL LAN 10/100/1000 Base-T Transformer Modules

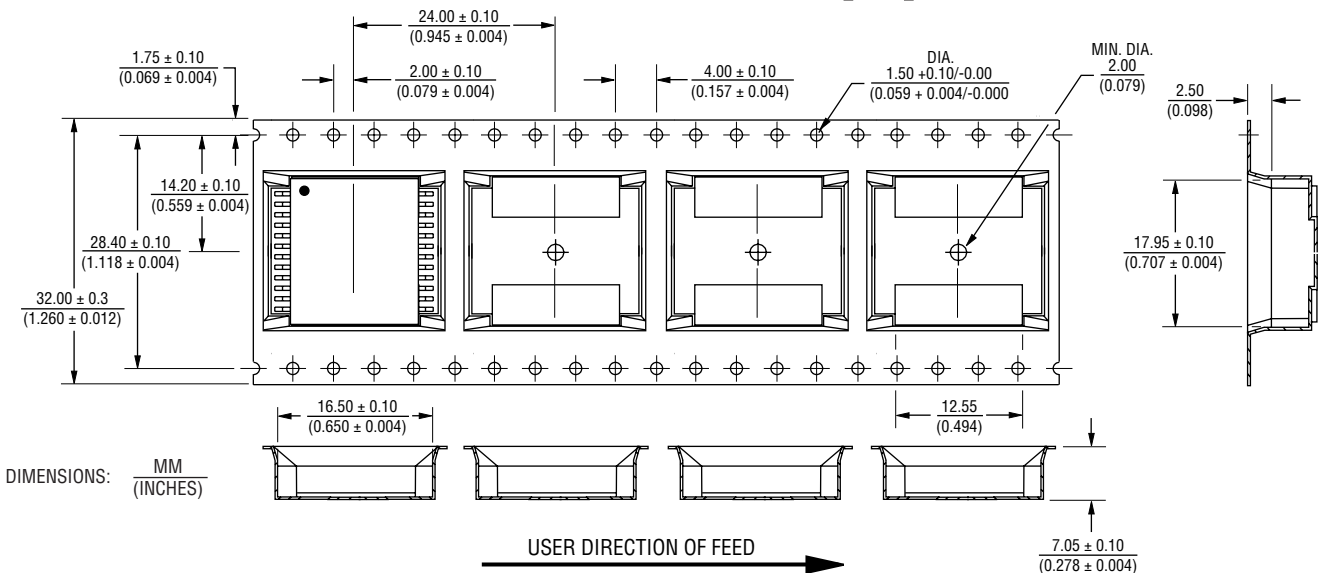
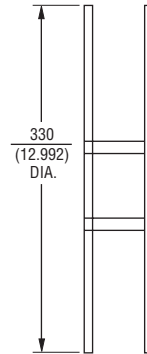
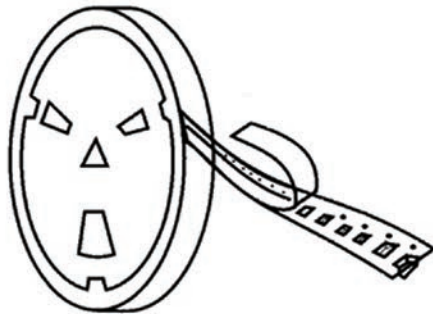


## Solder Profile



Ramp-up rate = 3 °C/sec. max.  
 Ramp-down rate = 6 °C/sec. max.  
 $T_L = 217\text{ °C}$     $t_L = 60\text{-}150\text{ sec.}$   
 $T_P = 250\text{ °C} \pm 3\text{ °C}$   
 Time within 5 °C of actual Peak Temp ( $t_p$ ) = 20-40 sec.  
 $T_S$  min = 150 °C    $T_S$  max = 200 °C  
 $T_S$  min to  $T_S$  max = 60-180 sec., 25 °C to Peak Temperature = 8 min. max.

## Packaging Specifications



REV. 03/20

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