

# 100/1000 Base-T Single Port LAN Transformer w/ PoE+ Extended Temperature

ALAN-2301

RoHS/RoHS II Compliant



17.50 x 15.60 x 5.40mm

## FEATURES:

- Meet IEEE802.3 specification
- Power Over Ethernet(PoE+)IEEE802.3at compliant performance
- Extended Temperature (-40°C - +85°C)
- ROHS peak reflow temperature rating 245°C
- 1500Vrms Hi-Pot

## APPLICATIONS:

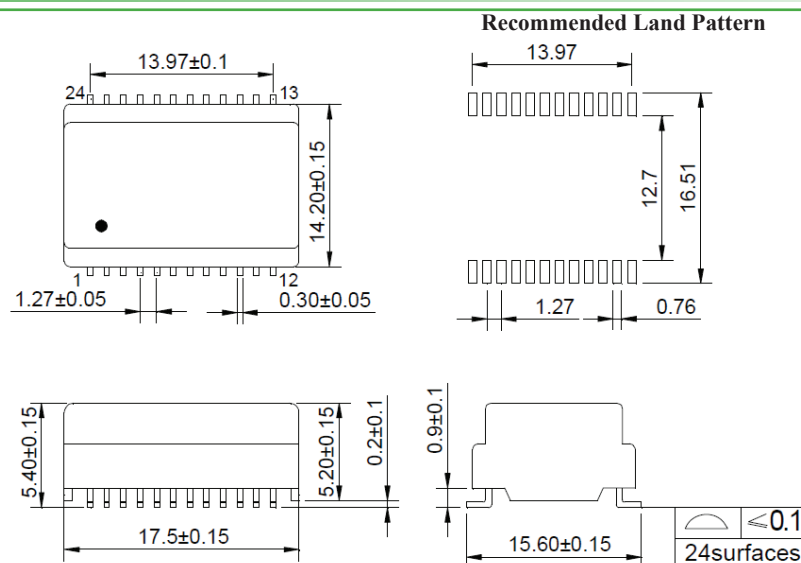
- Designed for most leading PHY IC manufacturers such as Broadcom, Marvell, Micrel, & Microsemi
- 1000Base-T Ethernet-LAN
- PoE+ Capabilities
- Symmetrical Tx & RX channels for Auto MDI/MDIX capability
- Provides signal conditioning, EMI suppression and signal isolation.
- Hubs/Switches/Routers/Servers/NIC Cards

## STANDARD SPECIFICATIONS:

### Key Electrical Specifications @ 25°C

| Parameters                            | Minimum  | Typical | Maximum | Units | Notes           |
|---------------------------------------|----------|---------|---------|-------|-----------------|
| Operating Temperature                 | -40      |         | +85     | °C    |                 |
| Storage Temperature                   | -40      |         | +85     | °C    |                 |
| Turn Ratio (± 5%)                     |          | 1CT:1CT |         |       |                 |
| Inductance (OCL)                      | 350      |         |         | μH    | 100KHz/0.1V@8mA |
| Leakage Inductance (LL)               |          |         | 0.5     | μH    | 100KHz/0.1V     |
| Cw/w                                  |          |         | 30      | pF    | 100KHz/0.1V     |
| DC Resistance                         |          |         | 1.2     | Ω     |                 |
| Insertion Loss                        |          |         | -1.1    | dB    | 1-100MHz        |
| Return Loss                           | -18      |         |         | dB    | 1-30MHz         |
|                                       | -16      |         |         |       | 40MHz           |
|                                       | -13      |         |         |       | 50MHz           |
|                                       | -12      |         |         |       | 60-80MHz        |
| Cross Talk                            |          | -30     |         | dB    | 1-100MHz        |
| Differential to Common Mode Rejection | -30      |         |         | dB    | 1-100MHz        |
| Common Mode Rejection                 | -30      |         |         | dB    | 1-100MHz        |
| PoE Current Capacity                  |          |         | 600     | mA    |                 |
| Hi-Pot                                | 1500Vrms |         |         |       |                 |

## OUTLINE DIMENSIONS:



Dimensions: mm (Unless otherwise specified, tolerances are ±0.25)

Dimension: mm

ABRACON IS  
ISO 9001:2008  
CERTIFIED

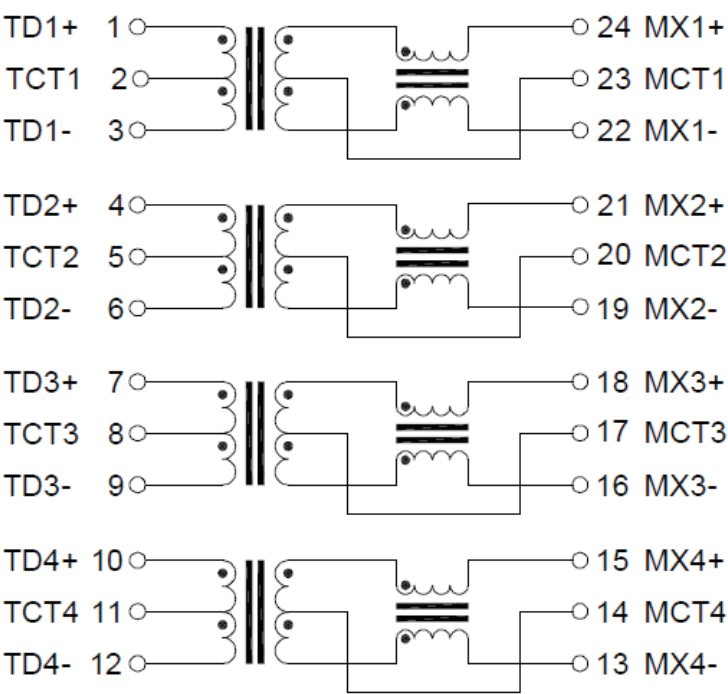
 **ABRACON**<sup>®</sup>  
The Power of Linking Together

2 Faraday, Suite# B | Irvine | CA 92618 **Revised: 03.19.15**  
Ph. 949.546.8000 | Fax. 949.546.8001  
Visit [www.abracon.com](http://www.abracon.com) for Terms and Conditions of Sale

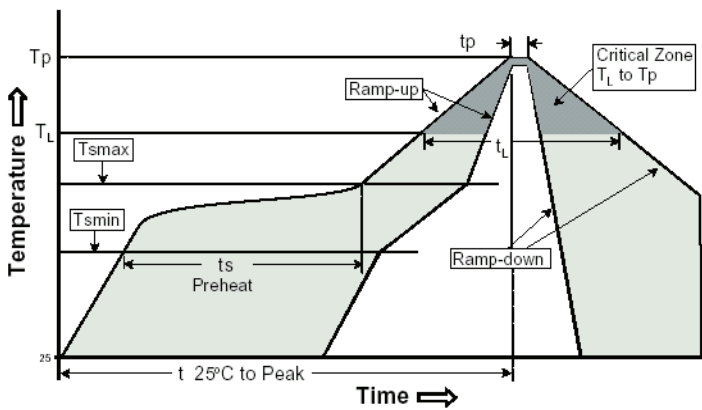


17.50 x 15.60 x 5.40mm

SCHEMATICS



REFLOW PROFILE:



| Profile Feature                                 | Pb-Free Assembly |
|---|------------------|
| Average Ramp-Up Rate (Ts <sub>max</sub> to Tp)  | 3°C /second max. |
| Preheat   |                  |
| -Temperature Min (Ts <sub>min</sub> )           | 150°C            |
| -Temperature Max (Ts <sub>max</sub> )           | 200°C            |
| -Time (ts <sub>min</sub> to ts <sub>max</sub> ) | 60-120 seconds   |
| Time maintained above:                          |                  |
| -Temperature (T <sub>L</sub> )                  | 217°C            |
| -Time (t <sub>L</sub> )                         | 60-150 seconds   |
| Peak/Classification Temperature (Tp)            | 245+0/-5°C       |
| Time within 5°C of actual Peak Temperature (tp) | 20-40 seconds    |
| Ramp-Down Rate                                  | 6°C /seconds max |
| Time 25°C to Peak Temperature                   | 8 minutes max.   |

# 100/1000 Base-T Single Port LAN Transformer w/ PoE+ Extended Temperature

ALAN-2301

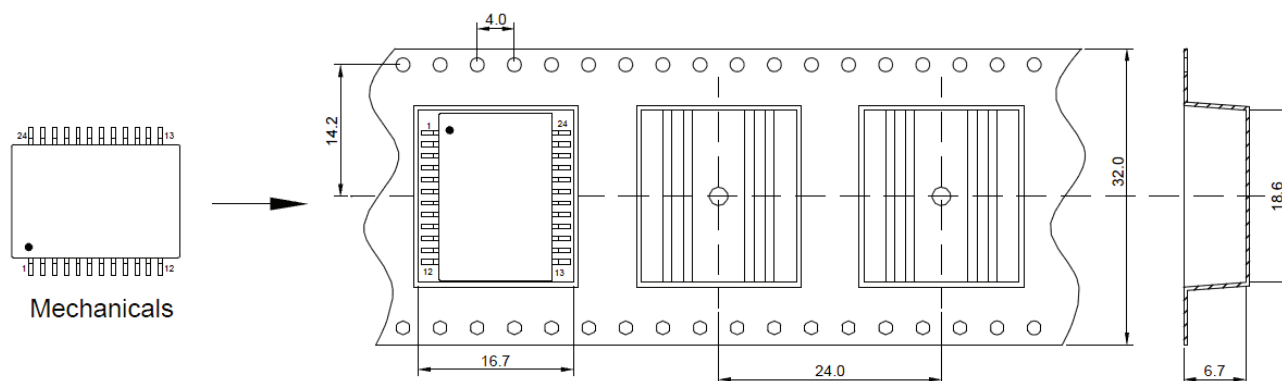
RoHS/RoHS II Compliant



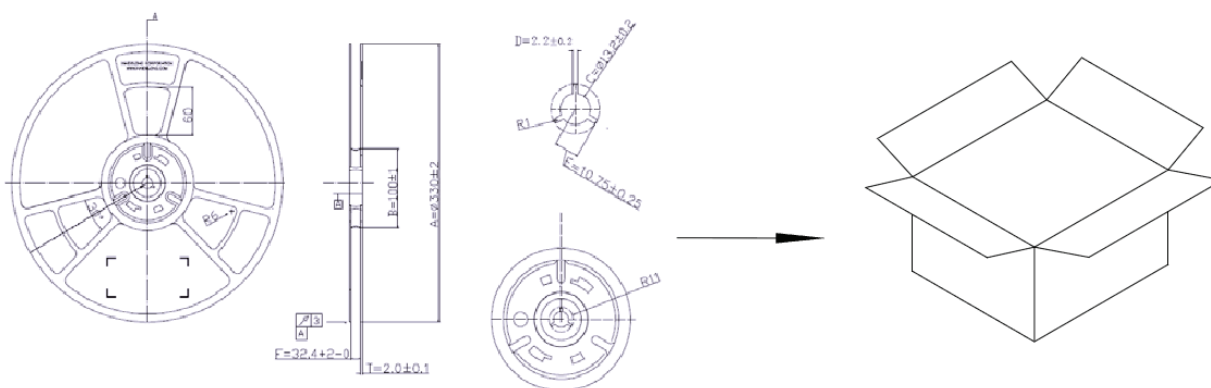
17.50 x 15.60 x 5.40mm

## TAPE & REEL:

Packing : 400 pcs / reel  
Weight 2.1 grams / pcs



Tape & Reel



Dimensions: mm

**ATTENTION:** Abracon Corporation's products are COTS – Commercial-Off-The-Shelf products; suitable for Commercial, Industrial and, where designated, Automotive Applications. Abracon's products are not specifically designed for Military, Aviation, Aerospace, Life-dependant Medical applications or any application requiring high reliability where component failure could result in loss of life and/or property. For applications requiring high reliability and/or presenting an extreme operating environment, written consent and authorization from Abracon Corporation is required. Please contact Abracon Corporation for more information.

ABRACON IS  
ISO 9001:2008  
CERTIFIED

 **ABRACON**<sup>®</sup>  
The Power of Linking Together LLC

2 Faraday, Suite# B | Irvine | CA 92618 **Revised: 03.19.15**  
Ph. 949.546.8000 | Fax. 949.546.8001  
Visit [www.abracon.com](http://www.abracon.com) for Terms and Conditions of Sale