

# 10/100 Base-T Single Port LAN Transformer w/ PoE+ Extended Temperature 3 Cores Solution

ALAN-2202

RoHS/RoHS II Compliant



12.70 x 9.40 x 5.70mm

## 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:

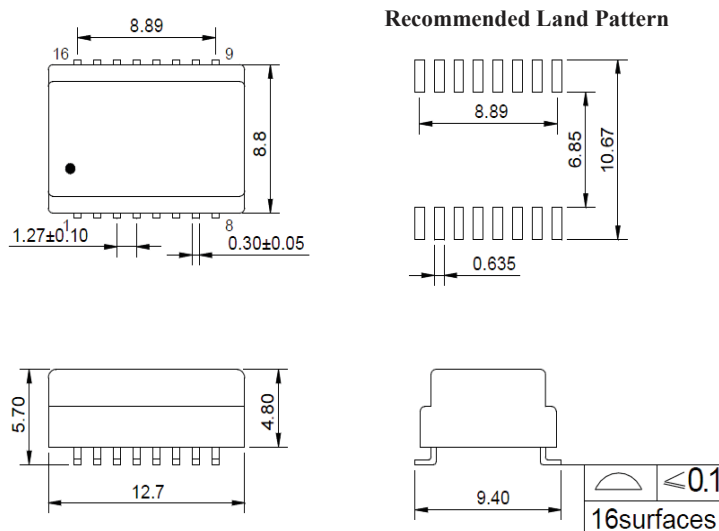
- Designed for most leading PHY IC manufacturers such as Broadcom, Marvell, Micrel, & Microsemi
- 10/100Base-T Ethernet-LAN
- VoIP/PoE+ Capabilities
- Symmetrical Tx & RX channels for Auto MDI/MDIX capability
- Provides signal conditioning, EMI suppression and signal isolation.
- Hubs/Switches/Routers/Servers/NIC 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                  |          |         | 720     | mA    |                 |
| Hi-Pot                                | 1500Vrms |         |         |       |                 |

## OUTLINE DIMENSIONS:



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

Dimension: mm



5101 Hidden Creek Ln Spicewood TX 78669  
Phone: 512-371-6159 | Fax: 512-351-8858  
For terms and conditions of sales, please visit:  
[www.abracon.com](http://www.abracon.com)

REVISED: 07-8-20

ABRACON IS  
ISO9001-2015  
CERTIFIED

# 10/100 Base-T Single Port LAN Transformer w/ PoE+ Extended Temperature 3 Cores Solution

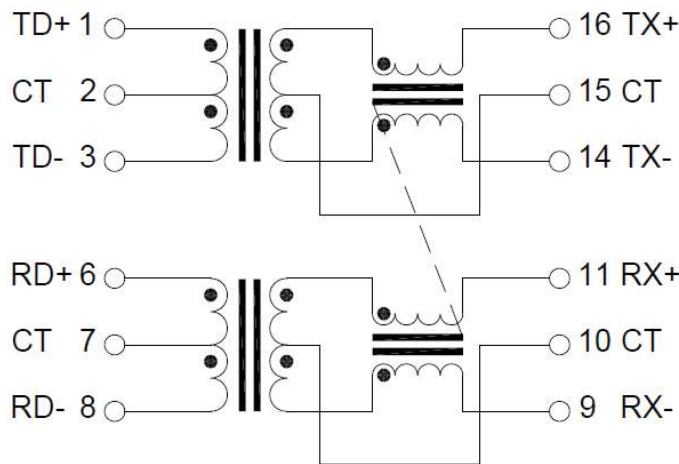
ALAN-2202

RoHS/RoHS II Compliant

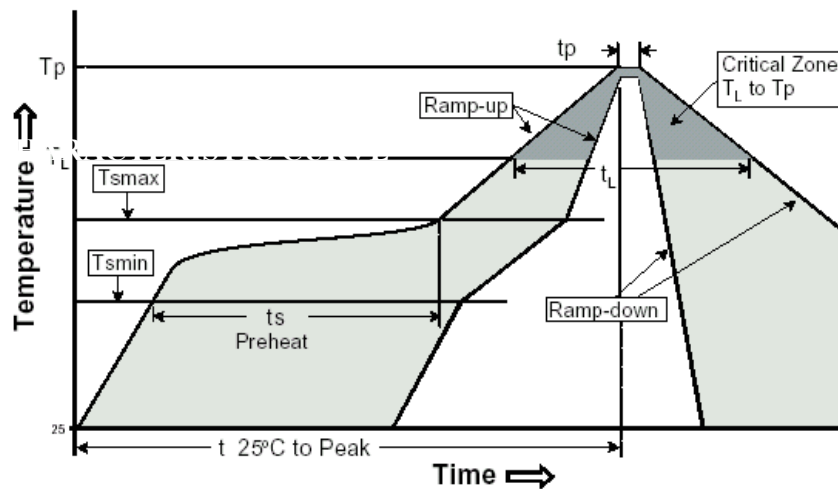


12.70 x 9.40 x 5.70mm

## SCHEMATICS



## REFLOW PROFILE:



| Profile Feature   | Pb-Free Assembly                 |
|---|----------------------------------|
| Average Ramp-Up Rate<br>( $T_{s \max}$ to $T_p$ )   | 3°C /second max.                 |
| Preheat<br>-Temperature Min ( $T_{s \min}$ )<br>-Temperature Max ( $T_{s \max}$ )<br>-Time ( $t_{s \min}$ to $t_{s \max}$ ) | 150°C<br>200°C<br>60-120 seconds |
| <b>Time maintained above:</b><br>-Temperature ( $T_l$ )<br>-Time ( $t_l$ )  | 217°C<br>60-150 seconds          |
| Peak/Classification Temperature ( $T_p$ )   | 245±5°C                          |
| Time within 5°C of actual Peak<br>Temperature ( $t_p$ )   | 20-40 seconds                    |
| Ramp-Down Rate  | 6°C /seconds max                 |
| Time 25°C to Peak Temperature   | 8 minutes max.                   |

# 10/100 Base-T Single Port LAN Transformer w/ PoE+ Extended Temperature 3 Cores Solution

ALAN-2202

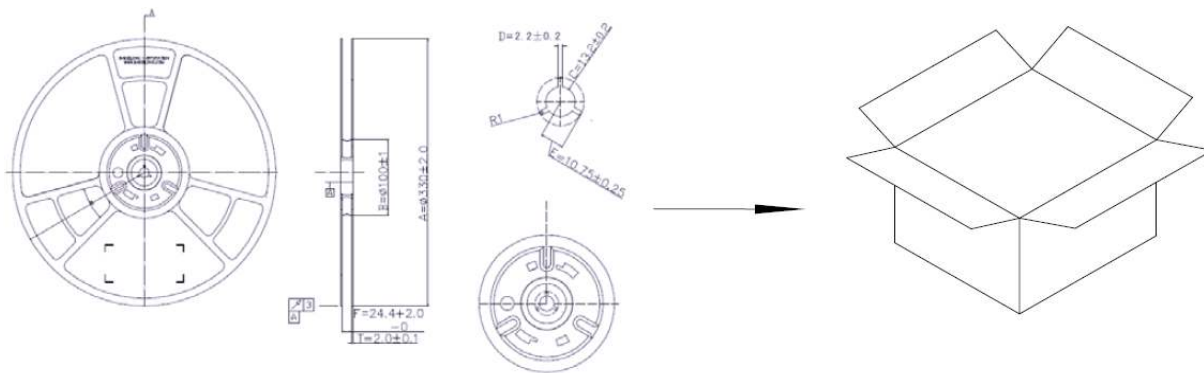
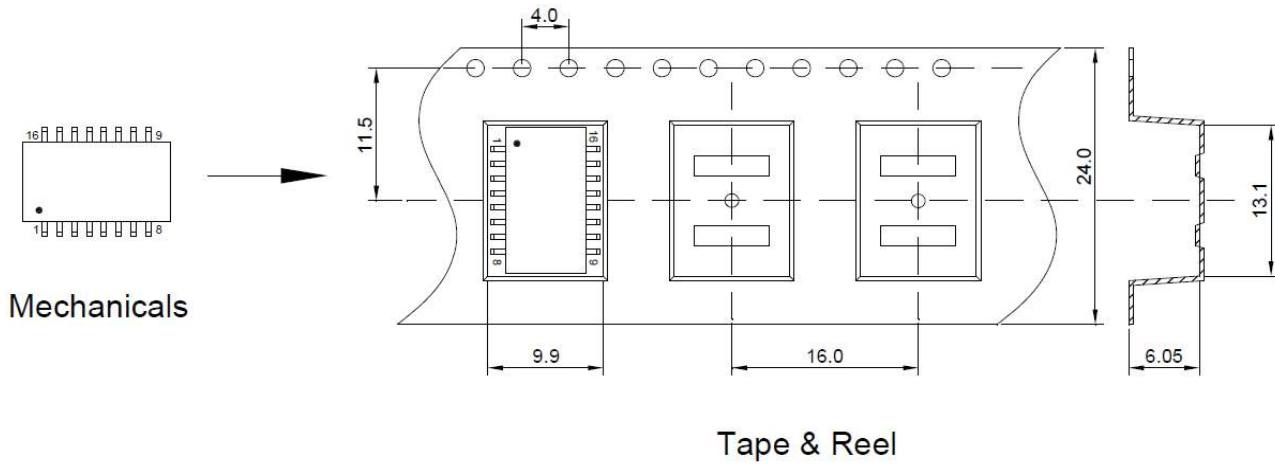
RoHS/RoHS II Compliant



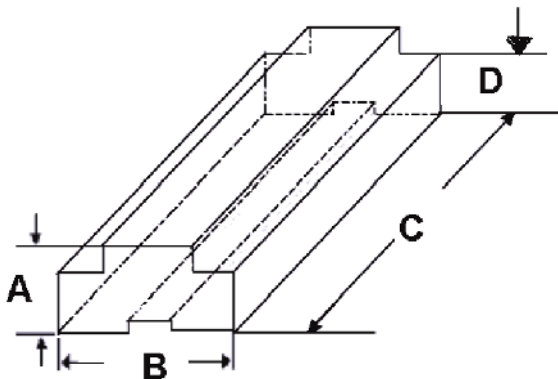
12.70 x 9.40 x 5.70mm

## TAPE & REEL:

**Packing Option I:** 700 pcs / reel  
**Weight:** 0.7 grams / pcs



**Packing Option II:** 36 pcs / tube  
**Weight:** 0.7 grams / pcs



| A    | B     | C     | D   |
|------|-------|-------|-----|
| 9.20 | 13.70 | 485.0 | 6.0 |

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.



5101 Hidden Creek Ln Spicewood TX 78669  
Phone: 512-371-6159 | Fax: 512-351-8858  
For terms and conditions of sales, please visit:  
[www.abracon.com](http://www.abracon.com)

REVISED: 07-8-20

ABRACON IS  
ISO9001-2015  
CERTIFIED