

# 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:

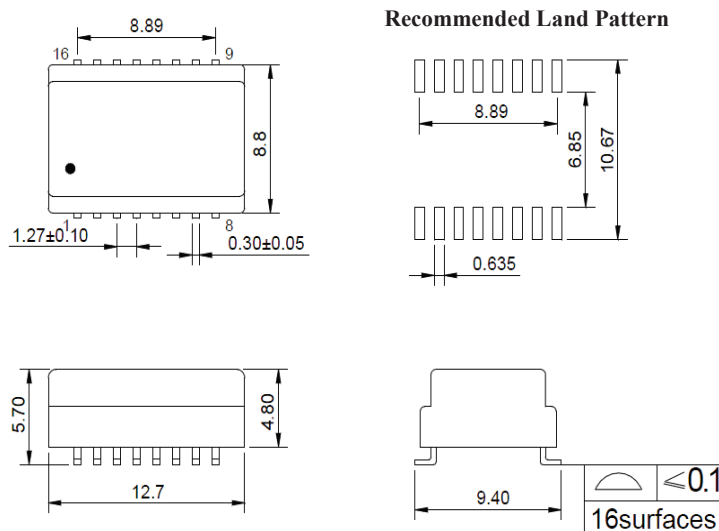
- Designed for most leading PHY IC manufacturers such as Broadcom, Marvell, Micrel, & Microsemi
- 10/100Base-T Ethernet-LAN
- VoIP/PoE+ Capabilities
- Symmetrical Tx & RX channels for Auto MDI/MDIX capability
- Provides signal conditioning, EMI suppression and signal isolation.
- Hubs/Switches/Routers/Servers/NIC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

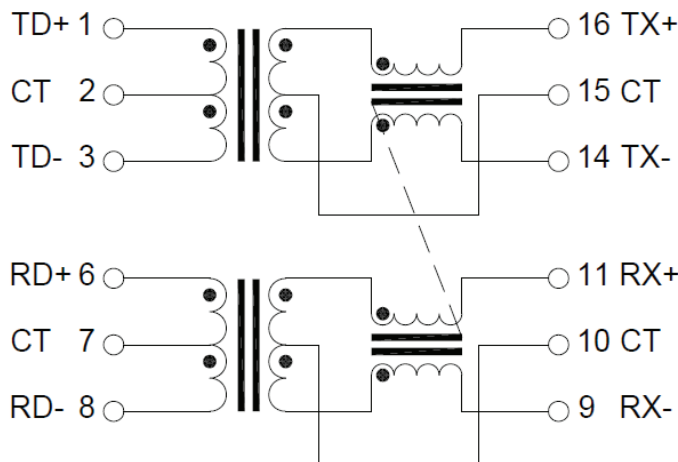
ALAN-2202

RoHS/RoHS II Compliant

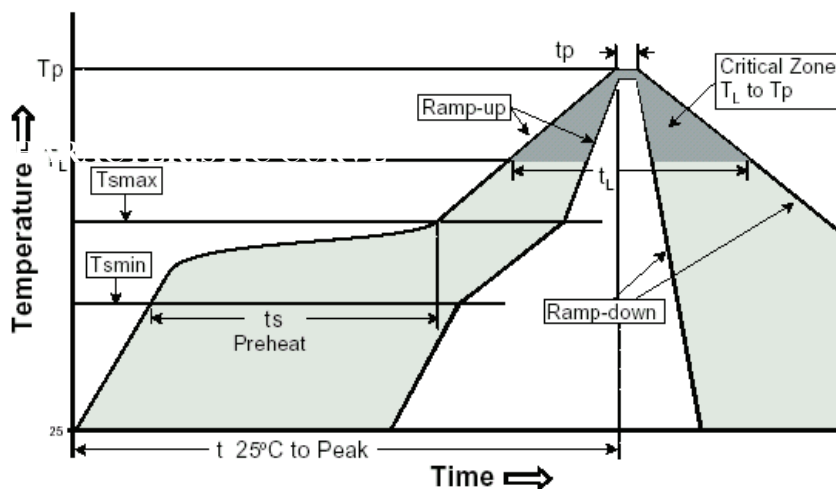


12.70 x 9.40 x 5.70mm

## SCHEMATICS



## REFLOW PROFILE:



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