

# 10G Base-T, Single, LAN Transformer, w/ PoE, 3 Wires

ALAN-2401

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
- 10G Ethernet-LAN
- PoE Capabilities
- Provides signal conditioning, EMI suppression and signal isolation.
- Hubs/Switches/Routers/Servers/NIC Cards

## STANDARD SPECIFICATIONS:

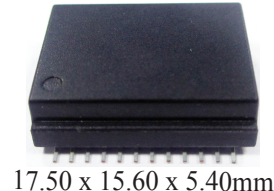
### Key Electrical Specifications @ 25°C

| Parameters                            | Minimum                                        | Typical | Maximum | Units         | Notes           |
|---------------------------------------|------------------------------------------------|---------|---------|---------------|-----------------|
| Operating Temperature                 | 0                                              |         | +70     | °C            |                 |
| Storage Temperature                   | -40                                            |         | +85     | °C            |                 |
| Turn Ratio ( $\pm 3\%$ )              |                                                | 1CT:1CT |         |               |                 |
| Inductance (OCL)                      | 120                                            |         |         | $\mu\text{H}$ | 100KHz/0.1V@8mA |
| Leakage Inductance (LL)               |                                                |         | 0.5     | $\mu\text{H}$ | 100KHz/0.1V     |
| Cw/w                                  |                                                |         | 30      | pF            | 100KHz/0.1V     |
| DC Resistance                         |                                                |         | 1.2     | $\Omega$      |                 |
| Insertion Loss                        |                                                |         | -1.2    | dB            | 1- 400MHz       |
| Return Loss                           | -18                                            |         |         | dB            | 1- 40MHz        |
|                                       | $-17+10\log(F/40\text{MHz})$                   |         |         |               | 40-500MHz       |
| Cross Talk                            |                                                | -40     |         | dB            | 1-100MHz        |
|                                       |                                                | -30     |         |               | 100-500MHz      |
| CM-DM Rejection Ratio                 |                                                | -30     |         |               | 1-250MHz        |
|                                       |                                                | -22     |         |               | 250-500MHz      |
| Differential to Common Mode Rejection | -30                                            |         |         | dB            | 1-100MHz        |
| Common Mode Rejection                 | -30                                            |         |         | dB            | 1-100MHz        |
| PoE Current Capacity                  |                                                |         | 350     | mA            |                 |
| Hi-Pot                                | 1500Vrms/0.5mA/60Sec or<br>1650Vrms/0.5mA/2Sec |         |         |               |                 |

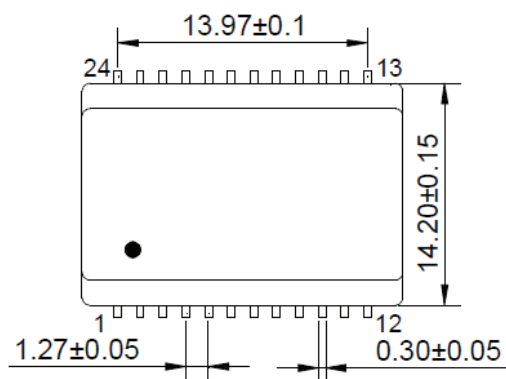
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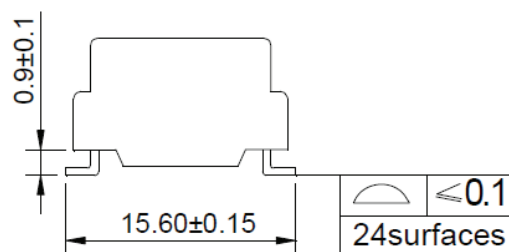
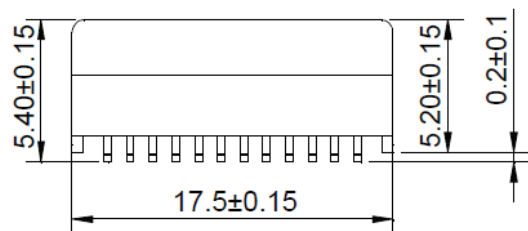
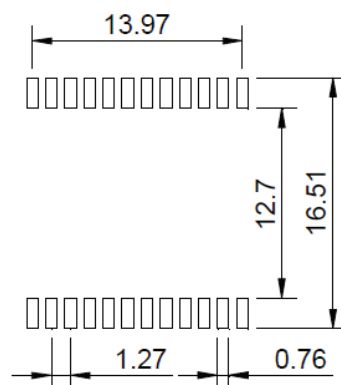
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## OUTLINE DIMENSIONS:

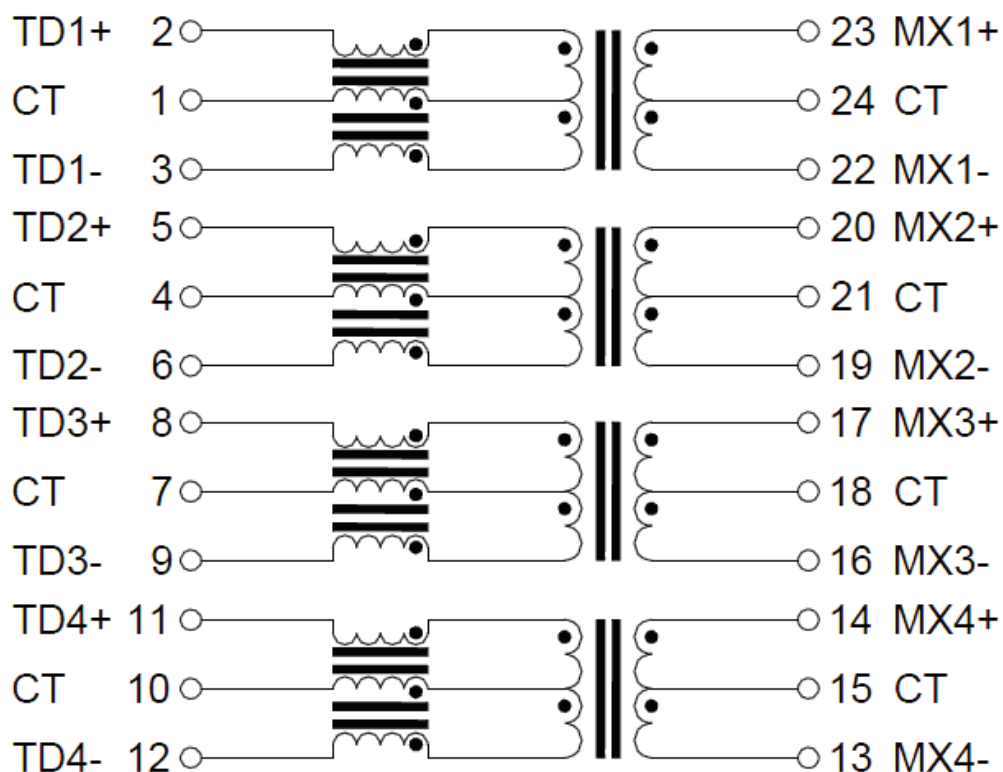


### Recommended Land Pattern



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

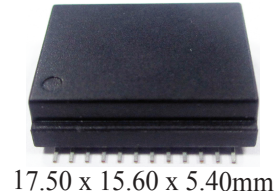
## SCHEMATICS



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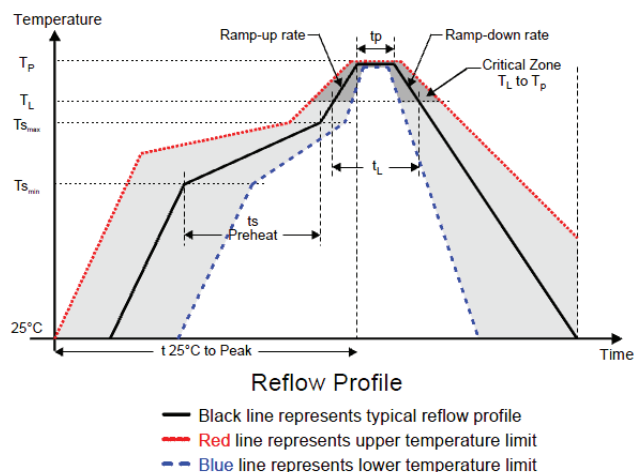
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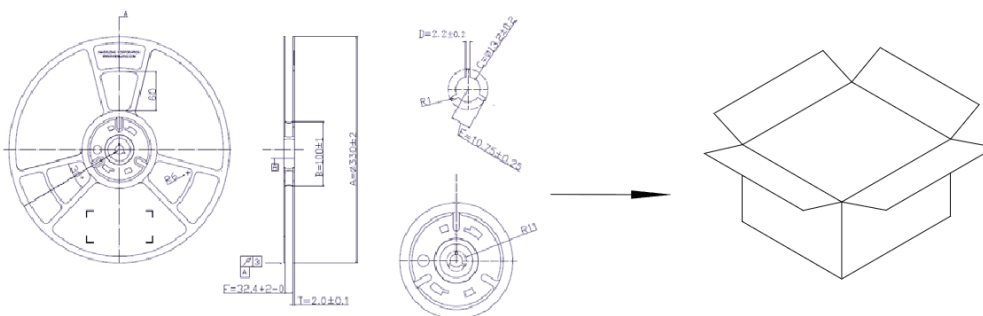
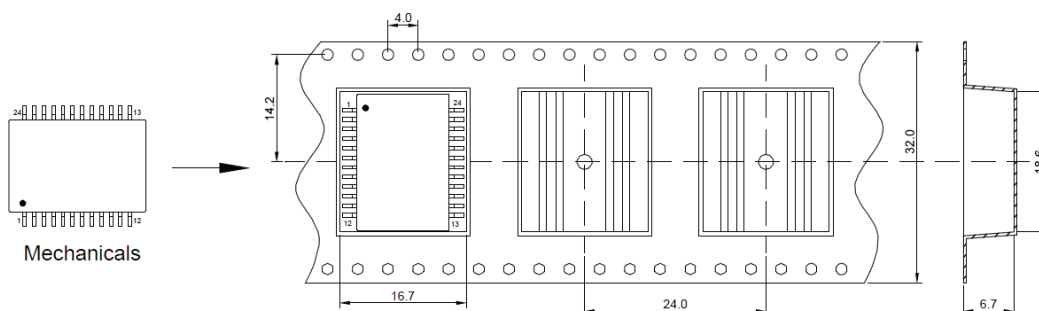
## REFLOW PROFILE:



| Profile Feature                                                                                                                              | Pb-Free Assembly                 |
|----------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| Average Ramp-Up Rate (Ts <sub>max</sub> to Tp)                                                                                               | 3°C /second max.                 |
| Preheat<br>-Temperature Min (Ts <sub>min</sub> )<br>-Temperature Max (Ts <sub>max</sub> )<br>-Time (ts <sub>min</sub> to ts <sub>max</sub> ) | 150°C<br>200°C<br>60-120 seconds |
| <b>Time maintained above:</b><br>-Temperature (T <sub>L</sub> )<br>-Time (t <sub>L</sub> )                                                   | 217°C<br>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.                   |

## TAPE & REEL:

Packing : 400 pcs / reel  
 Weight 2.1 grams / pcs



Dimensions: mm

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