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# 10/100Base-T Single Port LAN Transformer w/ PoE



12.70 x 9.40 x 5.70mm

**ALAN-505**

**RoHS/RoHS II Compliant**

## FEATURES:

- Meet IEEE802.3 specification
- Power Over Ethernet(PoE)IEEE802.3at compliant performance
- RoHS peak reflow temperature rating 245°C
- 1500Vrms Hi-Pot

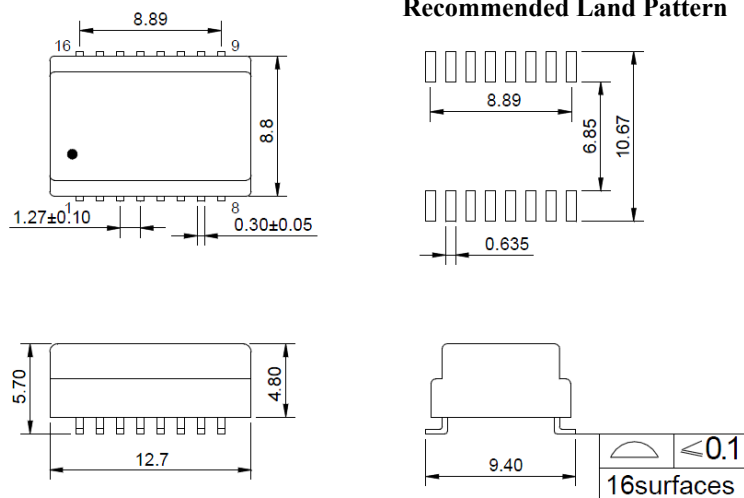
## APPLICATIONS:

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

## STANDARD SPECIFICATIONS:

| Parameters                            | Minimum                                     | Typical | Maximum | Units | Notes           |
|---------------------------------------|---|---------|---------|-------|-----------------|
| Operating Temperature                 | 0   |         | +70     | °C    |                 |
| Storage Temperature                   | -40   |         | +85     | °C    |                 |
| Turn Ratio (± 2%)                     |   | 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                        |   |         | -1.0    | dB    | 0.1-100MHz      |
| Return Loss                           |   | -16     |         | dB    | 30MHz           |
|                                       |   | -12     |         |       | 60MHz           |
|                                       |   | -11     |         |       | 80MHz           |
| Cross Talk                            |   | -50     |         | dB    | 30MHz           |
|                                       |   | -45     |         |       | 62MHz           |
|                                       |   | -40     |         |       | 100MHz          |
| Differential to Common Mode Rejection | -30   |         |         | dB    | 1-100MHz        |
| Common Mode Rejection                 |   | -35     |         | dB    | 30MHz           |
|                                       |   | -33     |         |       | 50MHz           |
|                                       |   | -20     |         |       | 100MHz          |
|                                       |   | -20     |         |       | 150MHz          |
| PoE Current Capacity                  |   |         | 350     | mA    |                 |
| Hi-Pot                                | 1500Vrms/0.5mA/60Sec or 1650Vrms/0.5mA/2Sec |         |         |       |                 |

## OUTLINE DIMENSIONS:



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

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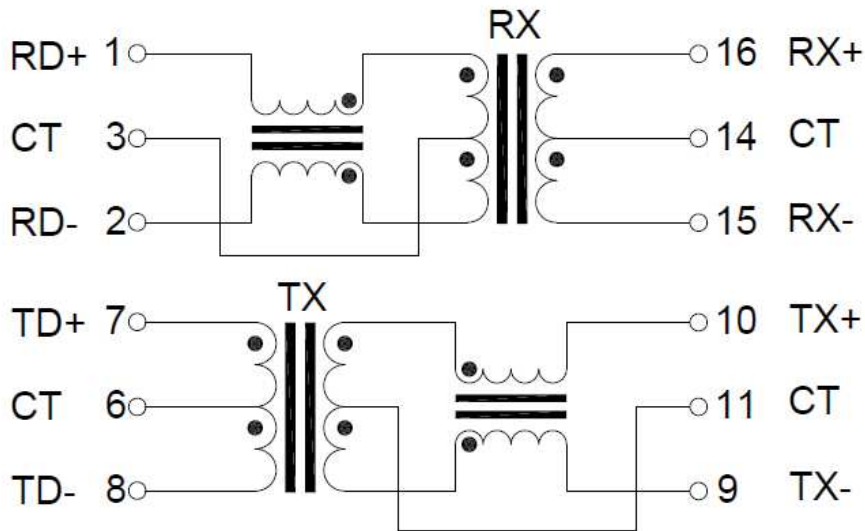
ALAN-505

RoHS/RoHS II Compliant

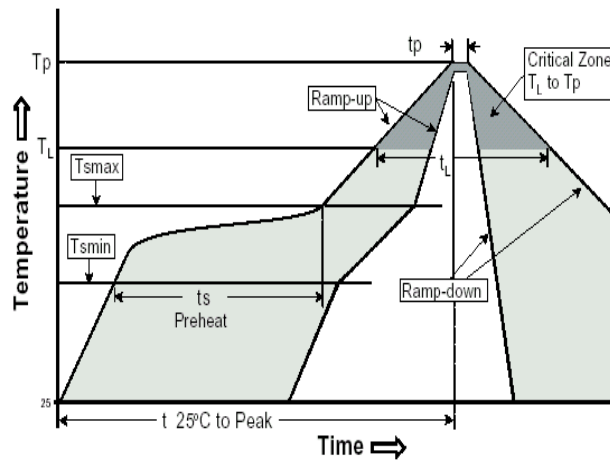


12.70 x 9.40 x 5.70mm

## SCHEMATIC:



## 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.   |



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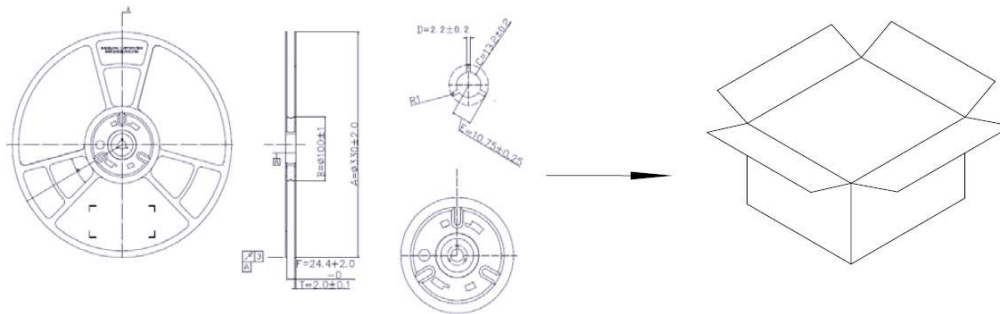
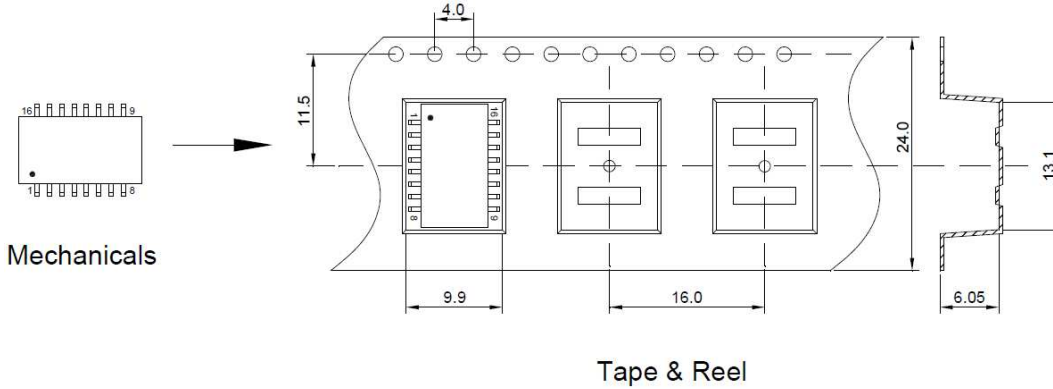
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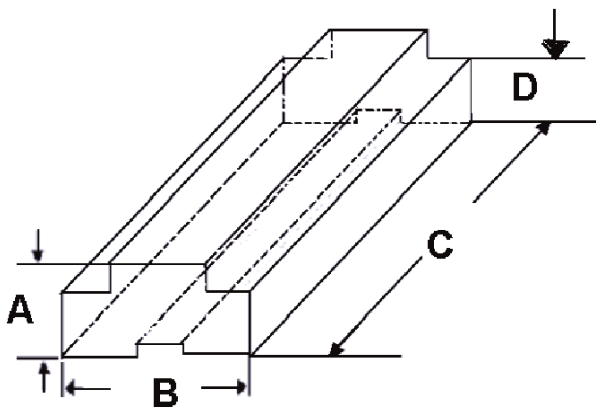


## TAPE & REEL:

**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 |

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