

ALAN210001



18.3 x 12.4 x 6.4 mm  
RoHS/RoHS II Compliant  
MSL = 1

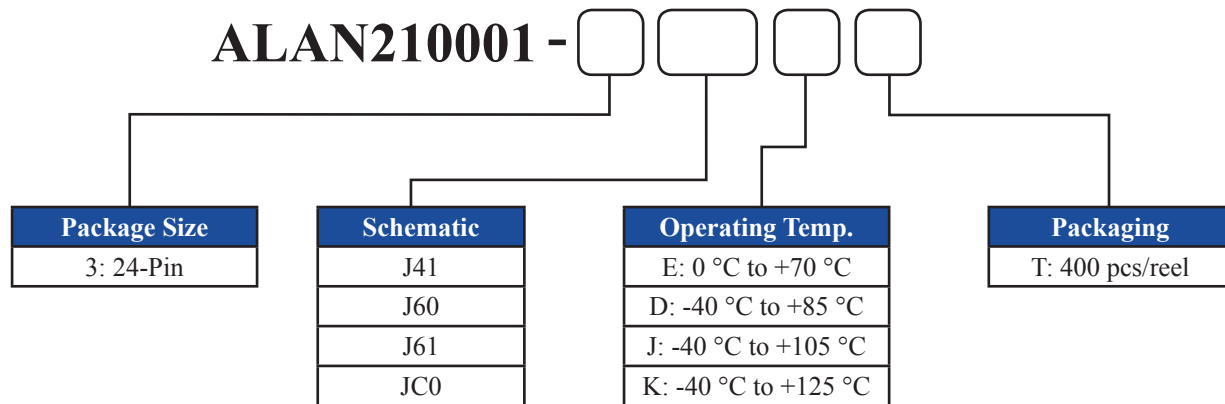
**Features**

- Meets IEEE 802.3at standards
- Supports speed up to 1 Gbps
- Power Over Ethernet up to 30 Watts
- Current capability up to 600 mA
- Operating temperature range up to -40°C to +125°C
- Compatible with major IC's for Ethernet applications
- High performance magnetics for EMI suppression and common mode noise rejection
- 1CT:1CT TX and RX Transformers

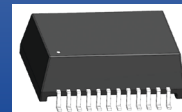
**Applications**

- Fast and gigabit Ethernet
- Hubs, servers, switches, routers, access points
- IP cameras, surveillance, and phone
- Industrial computers and robotics
- Networking and communications
- Broadcast video
- Set top box

**Part Identification**



# POE+ 10/100/1000 BASE-T Single Port SMD LAN Transformer Module



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## Electrical Specifications at 25°C

| Part Number     | Insertion Loss (dB Max) |         | Return Loss (dB Min) |           |           |         | Crosstalk (dB Min) |        |         | CMRR (dB Min) |        |         | DCMR (dB Min) |        |         |
|-----------------|-------------------------|---------|----------------------|-----------|-----------|---------|--------------------|--------|---------|---------------|--------|---------|---------------|--------|---------|
|                 | 0.3-100 MHz             | 125 MHz | 0.5-30 MHz           | 40-60 MHz | 60-80 MHz | 100 MHz | 30 MHz             | 50 MHz | 100 MHz | 30 MHz        | 60 MHz | 100 MHz | 30 MHz        | 60 MHz | 100 MHz |
| ALAN210001-3J41 | 1.2                     | 2.0     | 16                   | 14        | 12        | 10      | 35                 | 28     | 23      | 55            | 36     | 31      | 43            | 36     | 31      |
| ALAN210001-3J60 | 1.2                     | 2.0     | 16                   | 14        | 12        | 10      | 35                 | 28     | 23      | 55            | 36     | 31      | 43            | 36     | 31      |
| ALAN210001-3J61 | 1.2                     | 2.0     | 16                   | 14        | 12        | 10      | 35                 | 28     | 23      | 55            | 36     | 31      | 43            | 36     | 31      |
| ALAN210001-3JC0 | 1.2                     | 2.0     | 16                   | 14        | 12        | 10      | 35                 | 28     | 23      | 55            | 36     | 31      | 43            | 36     | 31      |

| Part Number           | Inductance (uH Min)               | Leakage Inductance (uH Max)   | Interwinding Capacitance (pF Max) | DC Resistance (Ω Max) |           | Hi Pot (Vrms) | Weight (g)       |
|-----------------------|-----------------------------------|-------------------------------|-----------------------------------|-----------------------|-----------|---------------|------------------|
|                       |                                   |                               |                                   | Primary               | Secondary |               |                  |
| <b>Test Condition</b> | <b>@100kHz, 0.2V, 8mA DC Bias</b> | <b>@100kHz, 0.1V TD to MX</b> | <b>@100kHz, 0.1V TD to MX</b>     |                       |           | <b>6 sec.</b> | <b>Per Piece</b> |
| ALAN210001-3J41       | 350                               | 0.5                           | 35                                | 1.0                   | 1.0       | 1500          | 2.1              |
| ALAN210001-3J60       | 350                               | 0.5                           | 35                                | 1.2                   | 1.0       | 1500          | 2.1              |
| ALAN210001-3J61       | 350                               | 0.5                           | 35                                | 1.2                   | 1.0       | 1500          | 2.1              |
| ALAN210001-3JC0       | 350                               | 0.5                           | 35                                | 1.0                   | 1.2       | 1500          | 2.1              |

| Standard                     | Current (mA Max) | Voltage (V)      | Power Delivered per Port (W Max) |
|------------------------------|------------------|------------------|----------------------------------|
| IEEE 802.3at : Type-2 / POE+ | 600              | @57 V Continuous | 30                               |



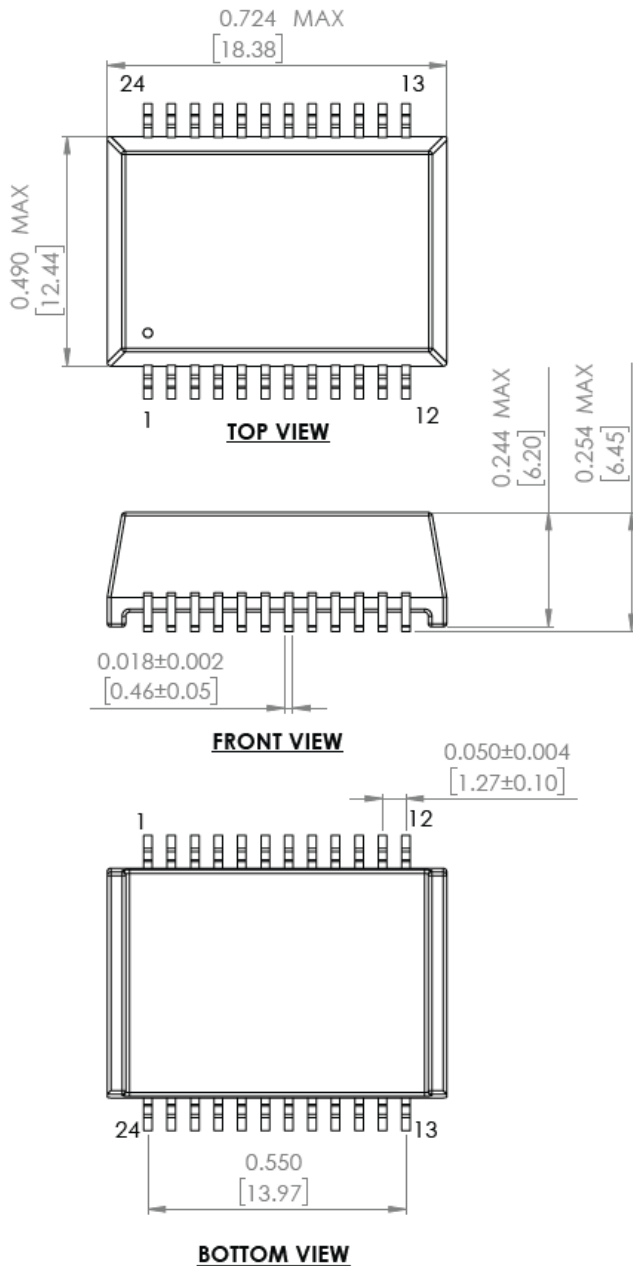
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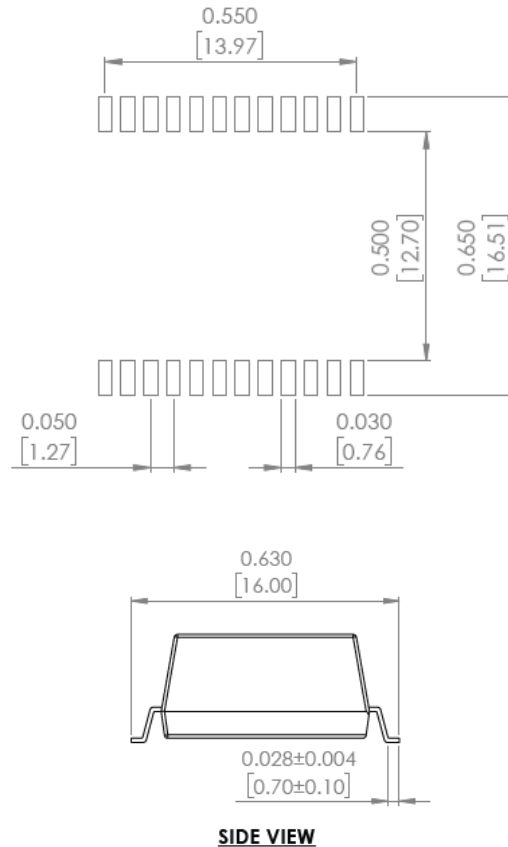
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**Mechanical Dimensions**

**3: 24-pin**



**RECOMMENDED LAND PATTERN**



Unless otherwise specified, all tolerances are ±0.010 [0.25]  
Dimensions: inch [mm]



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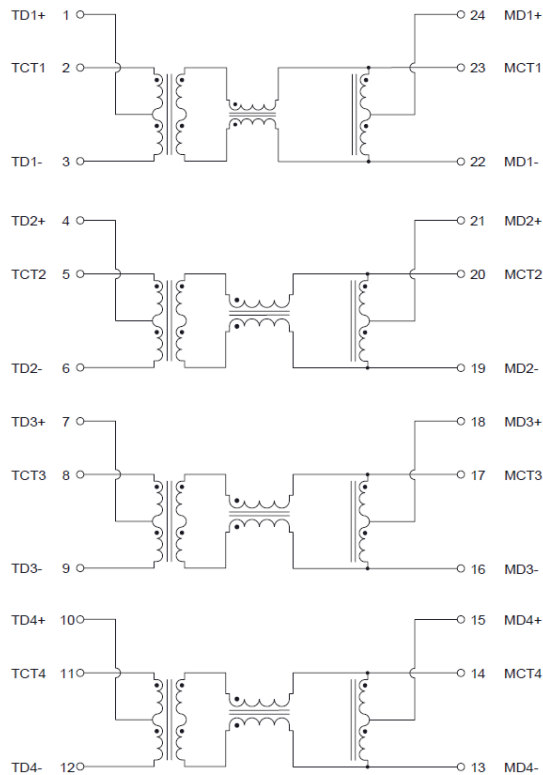


18.3 x 12.4 x 6.4 mm  
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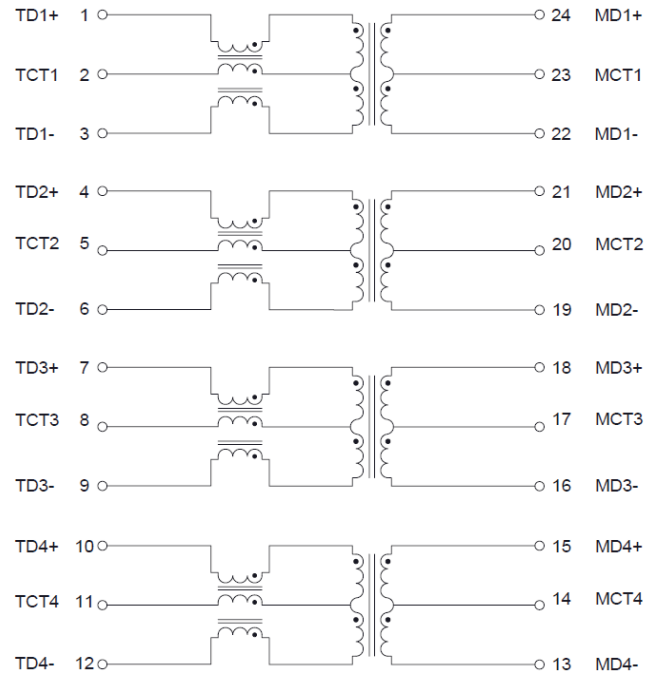
Schematics

24-Pin

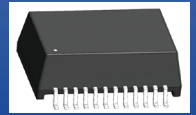
J41



J60



Contact Abracon for additional options.



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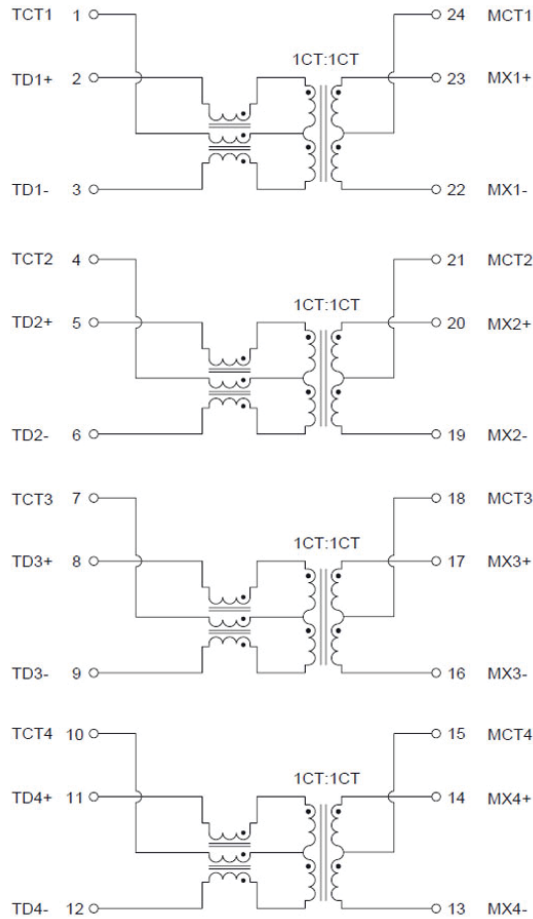


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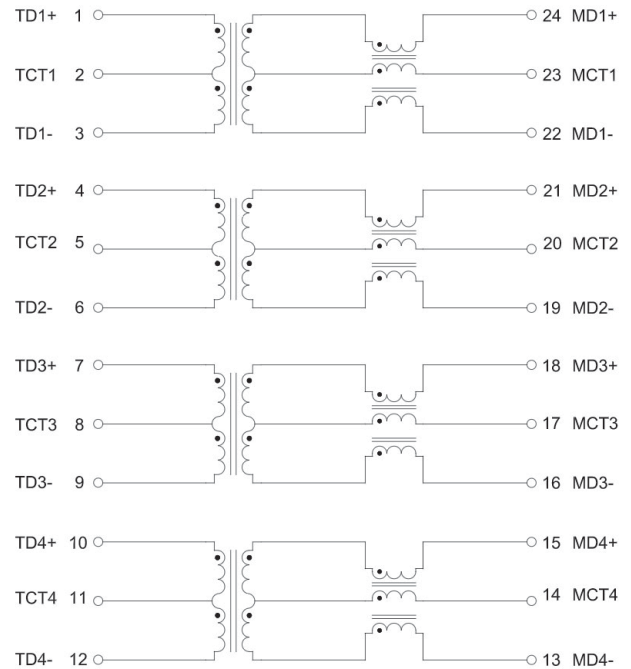
Schematics

24-Pin

J61



JC0



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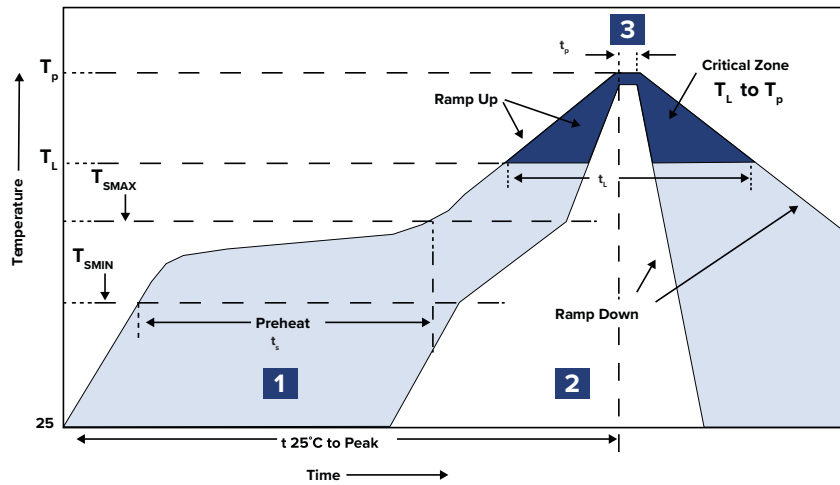


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Reflow Profile



| Zone | Description    | Temperature              | Time                   |
|------|----------------|--------------------------|------------------------|
| 1    | Preheat / Soak | $T_S$<br>150 °C ~ 200 °C | $t_s$<br>60 ~ 120 sec. |
| 2    | Reflow         | $T_L$<br>217 °C          | $t_L$<br>60 ~ 150 sec. |
| 3    | Peak heat      | $T_p$<br>245 ± 5 °C      | $t_p$<br>20 ~ 40 sec.  |