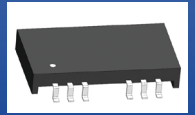


10/100 BASE-TX Low Profile SMD LAN Transformer Module



ALANL100X1



12.7 x 7.1 x 2.1 mm
RoHS/RoHS II Compliant
MSL = 1

Features

- Low Profile of 2.15 mm
- Meets IEEE 802.3u standards
- Compatible with 10 BASE-T and 100 BASE-TX
- RoHS Compliant
- High performance magnetics for EMI suppression and common mode noise rejection
- 1CT:1CT TX and RX Transformers

Applications

- Fast Ethernet
- IP cameras, surveillance, and IP phone
- Industrial computers and robotics
- PC Card and Cardbus

Part Identification

ALANL100X1 - [] [] [] []

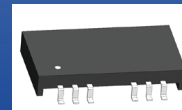
| Package Size |
|--------------|
| D: 12-Pin |
| E: 16-Pin |

| Schematic | |
|-----------|--------|
| 12-Pin | 16-Pin |
| E10 | F10 |
| E12 | F12 |
| E62 | F62 |
| ED2 | FD2 |

| Operating Temp. |
|----------------------|
| E: 0 °C to +70 °C |
| D: -40 °C to +85 °C |
| J: -40 °C to +105 °C |
| K: -40 °C to +125 °C |

| Packaging |
|-------------------|
| B: Bulk |
| T: 2,000 pcs/reel |

10/100 BASE-TX Low Profile SMD LAN Transformer Module



ALANL100X1



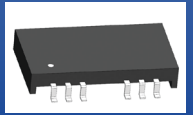
12.7 x 7.1 x 2.1 mm
RoHS/RoHS II Compliant
MSL = 1

Electrical Specifications at 25°C

| Part Number | Insertion Loss (dB Max) | Return Loss (dB Min) | | | | Crosstalk (dB Min) | | | CMRR (dB Min) | | | DCMR (dB Min) | | |
|-----------------|-------------------------|----------------------|--------|--------|---------|--------------------|--------|---------|---------------|--------|---------|---------------|--------|---------|
| | 0.5-100 MHz | 1-40 MHz | 60 MHz | 80 MHz | 100 MHz | 30 MHz | 60 MHz | 100 MHz | 30 MHz | 60 MHz | 100 MHz | 30 MHz | 60 MHz | 100 MHz |
| ALANL100X1-DE10 | 1.2 | 18 | 14.4 | 12 | 10 | 45 | 40 | 35 | 43 | 37 | 33 | 43 | 37 | 33 |
| ALANL100X1-DE12 | 1.2 | 18 | 14.4 | 12 | 10 | 45 | 40 | 35 | 43 | 37 | 33 | 43 | 37 | 33 |
| ALANL100X1-DE62 | 1.2 | 18 | 14.4 | 12 | 10 | 45 | 40 | 35 | 43 | 37 | 33 | 43 | 37 | 33 |
| ALANL100X1-DED2 | 1.2 | 18 | 14.4 | 12 | 10 | 45 | 40 | 35 | 43 | 37 | 33 | 43 | 37 | 33 |
| ALANL100X1-EF10 | 1.2 | 18 | 14.4 | 12 | 10 | 45 | 40 | 35 | 43 | 37 | 33 | 43 | 37 | 33 |
| ALANL100X1-EF12 | 1.2 | 18 | 14.4 | 12 | 10 | 45 | 40 | 35 | 43 | 37 | 33 | 43 | 37 | 33 |
| ALANL100X1-EF62 | 1.2 | 18 | 14.4 | 12 | 10 | 45 | 40 | 35 | 43 | 37 | 33 | 43 | 37 | 33 |
| ALANL100X1-EFD2 | 1.2 | 18 | 14.4 | 12 | 10 | 45 | 40 | 35 | 43 | 37 | 33 | 43 | 37 | 33 |

| Part Number | Inductance (uH Min) | Leakage Inductance (uH Max) | Interwinding Capacitance (pF Max) | DC Resistance (Ω Max) | | Hi Pot (Vrms) | Weight (g) |
|-----------------|----------------------------|-----------------------------|-----------------------------------|-----------------------|------------------|---------------|------------|
| | | | | TD+ to TD- | MX+ to MX- | | |
| Test Condition | @100kHz, 0.2V, 8mA DC Bias | @100kHz, 0.1V TD to MX | @100kHz, 0.1V TD to MX | | | 0.5mA/6 sec. | Per Piece |
| ALANL100X1-DE10 | 350 | 0.5 | 30 | 1.0 | 1.5 | 1500 | 0.33 |
| ALANL100X1-DE12 | 350 | 0.5 | 30 | 1.0 | 1.5 | 1500 | 0.33 |
| ALANL100X1-DE62 | 350 | 0.5 | 30 | 1.5 | 1.0 | 1500 | 0.33 |
| ALANL100X1-DED2 | 350 | 0.5 | 30 | 1.5 (1-2, 7-8) | 1.0 (5-6, 11-12) | 1500 | 0.33 |
| ALANL100X1-EF10 | 350 | 0.5 | 30 | 1.0 | 1.5 | 1500 | 0.33 |
| ALANL100X1-EF12 | 350 | 0.5 | 30 | 1.0 | 1.5 | 1500 | 0.33 |
| ALANL100X1-EF62 | 350 | 0.5 | 30 | 1.5 | 1.0 | 1500 | 0.33 |
| ALANL100X1-EFD2 | 350 | 0.5 | 30 | 1.5 (1-2, 9-10) | 1.0 (7-8, 15-16) | 1500 | 0.33 |

10/100 BASE-TX Low Profile SMD LAN Transformer Module



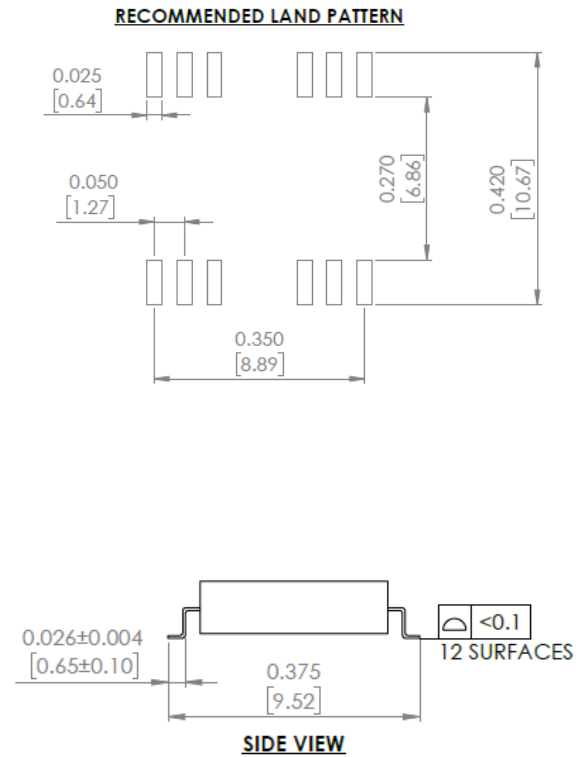
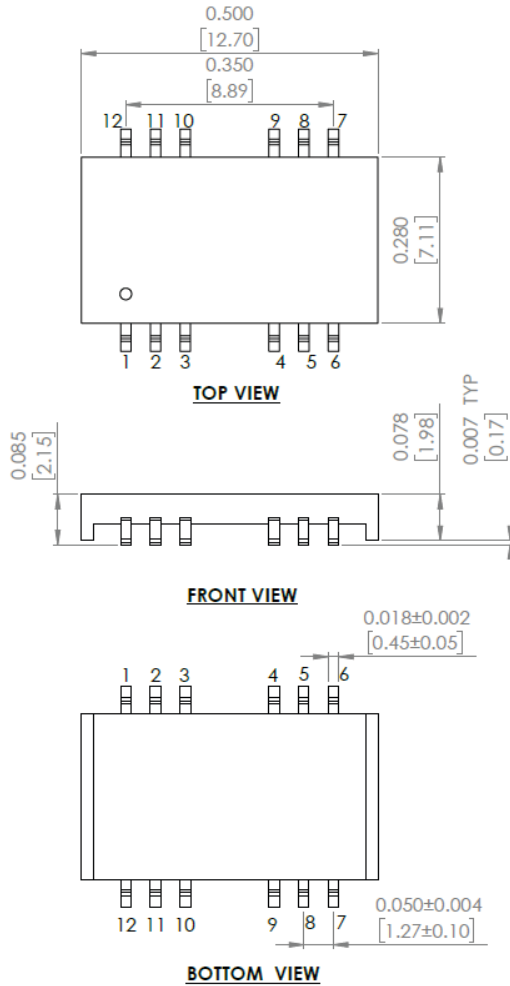
ALANL100X1



12.7 x 7.1 x 2.1 mm
RoHS/RoHS II Compliant
MSL = 1

Mechanical Dimensions

D: 12-pin



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

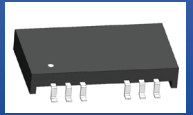


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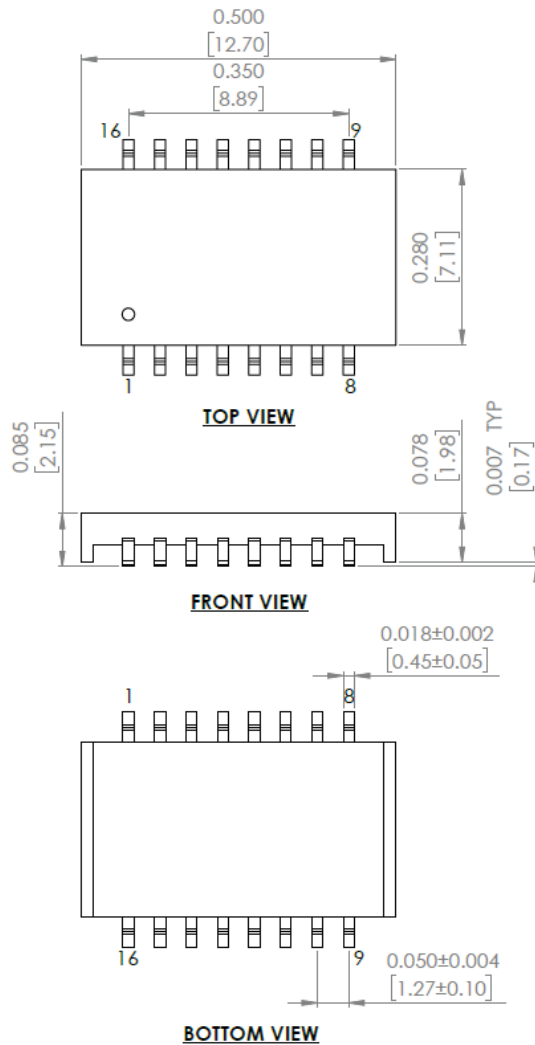
ALANL100X1



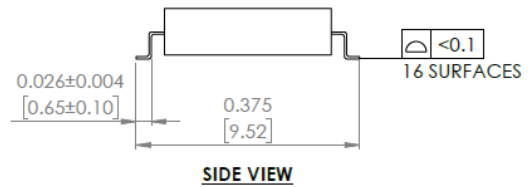
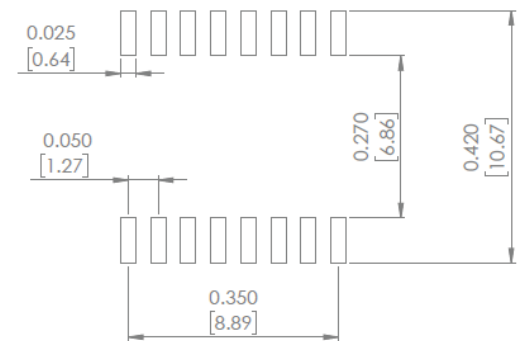
12.7 x 7.1 x 2.1 mm
RoHS/RoHS II Compliant
MSL = 1

Mechanical Dimensions

E: 16-pin



RECOMMENDED LAND PATTERN



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

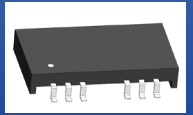


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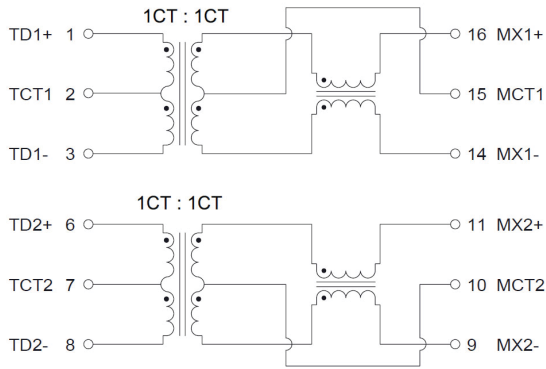


12.7 x 7.1 x 2.1 mm
RoHS/RoHS II Compliant
MSL = 1

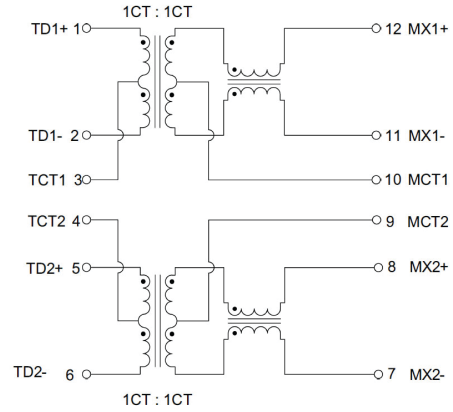
Schematics

12-Pin

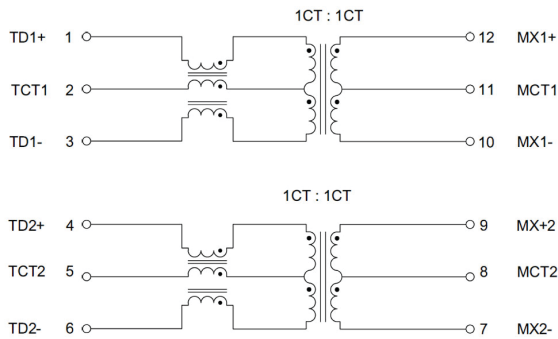
E10



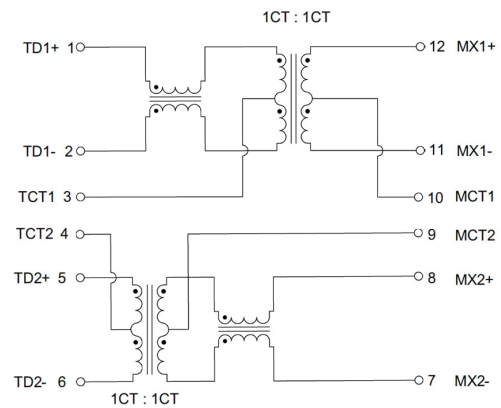
E12



E62



ED2



Contact Abracon for additional options.

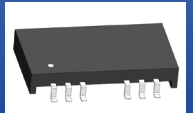


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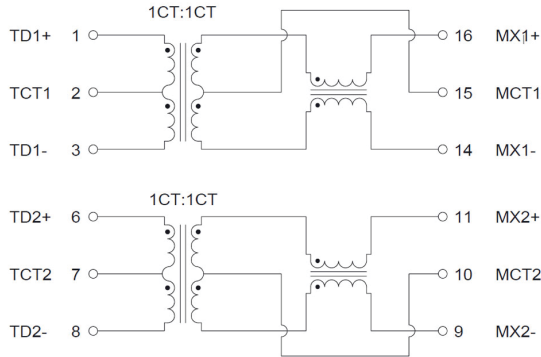


12.7 x 7.1 x 2.1 mm
RoHS/RoHS II Compliant
MSL = 1

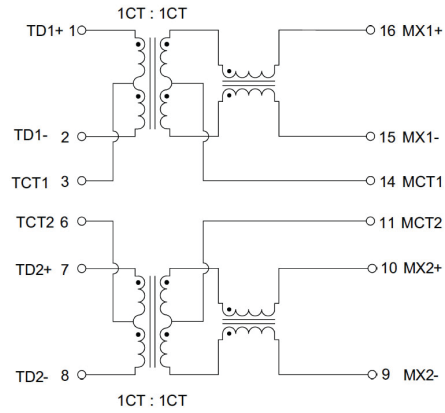
Schematics

16-Pin

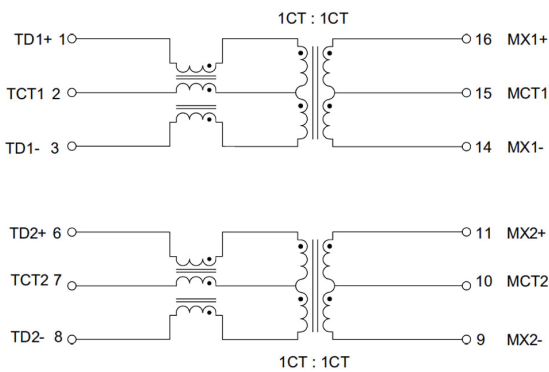
F10



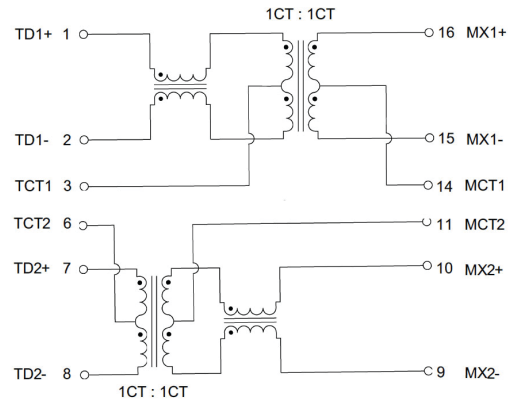
F12



F62



FD2



Contact Abracon for additional options.

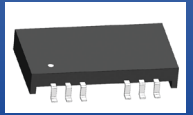


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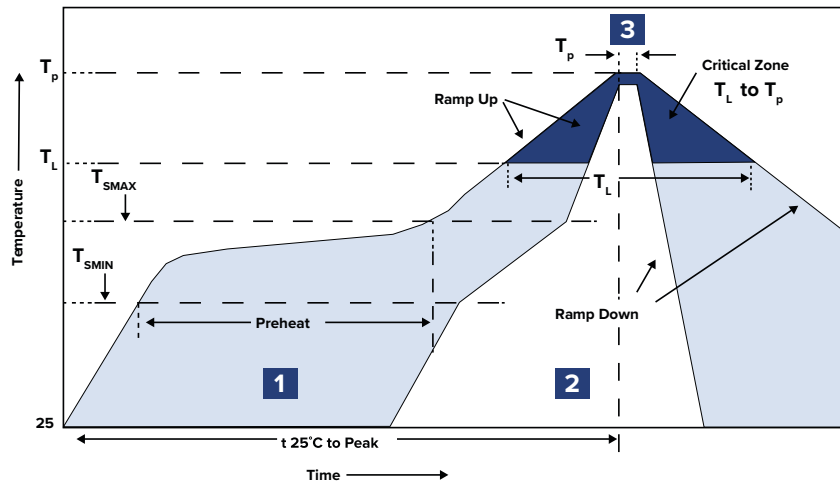


ALANL100X1



12.7 x 7.1 x 2.1 mm
RoHS/RoHS II Compliant
MSL = 1

Reflow Profile



| Zone | Description | Temperature | Time |
|------|----------------|---|---------------|
| 1 | Preheat / Soak | $T_{SMIN} \sim T_{SMAX}$ 150°C ~ 200°C | 60 ~ 180 sec. |
| 2 | Reflow | T_L 245°C | 20 ~ 40 sec. |
| 3 | Peak heat | T_P 240°C ± 5°C | 10 sec. MAX |