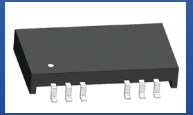


# 10/100 BASE-TX Low Profile SMD LAN Transformer Module



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 - [ ] [ ] [ ] [ ]

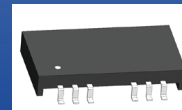
Package Size
D: 12-Pin
E: 16-Pin

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



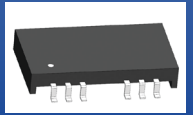
12.7 x 7.1 x 2.1 mm  
RoHS/RoHS II Compliant  
MSL = 1

## 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



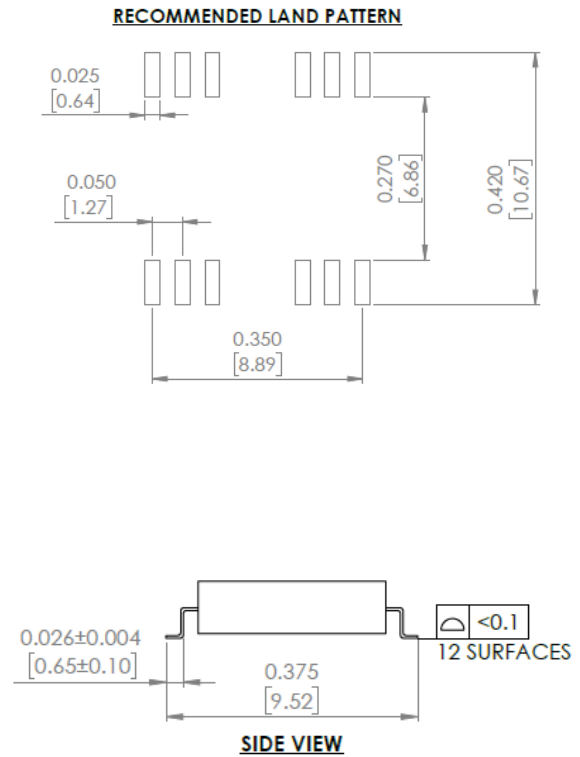
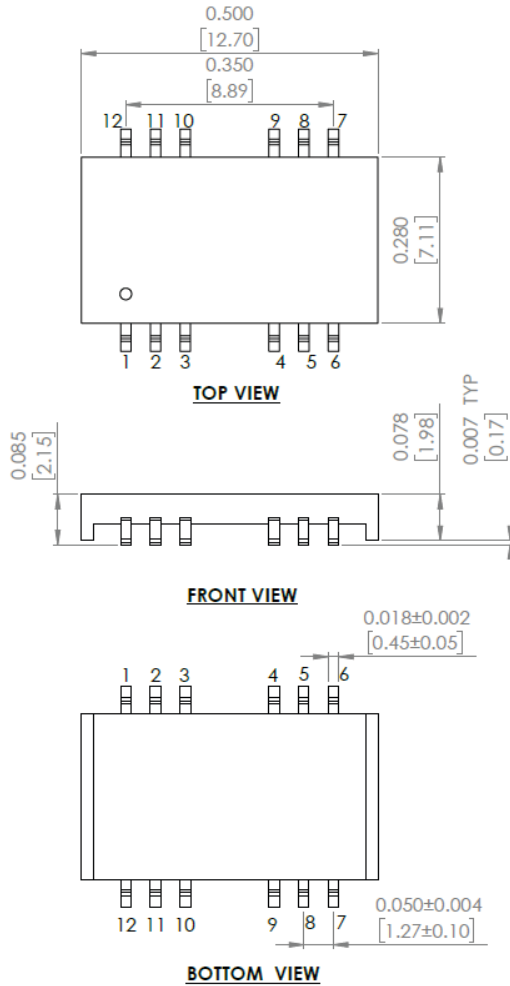
ALANL100X1



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]

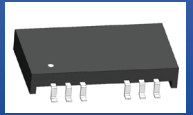


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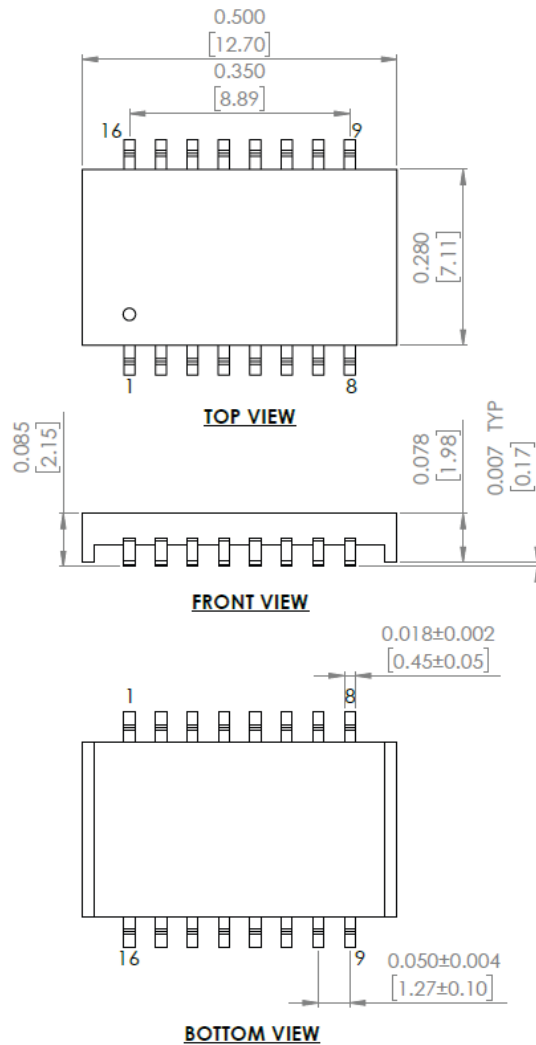
ALANL100X1



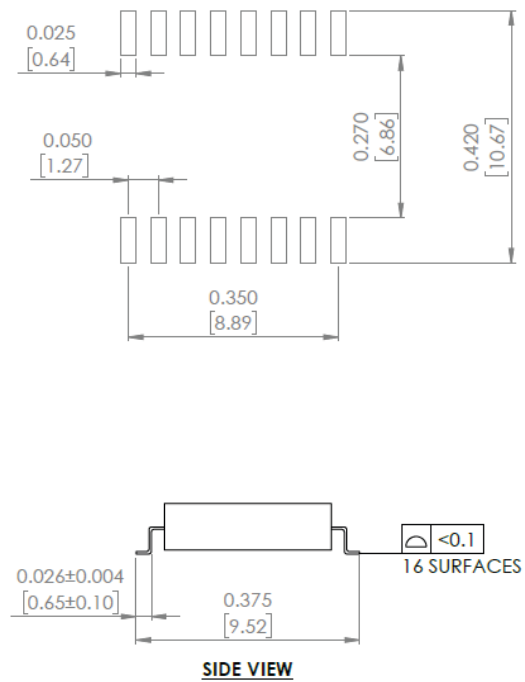
12.7 x 7.1 x 2.1 mm  
RoHS/RoHS II Compliant  
MSL = 1

## Mechanical Dimensions

**E: 16-pin**

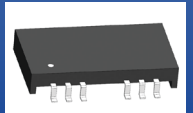


### RECOMMENDED LAND PATTERN



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

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



ALANL100X1

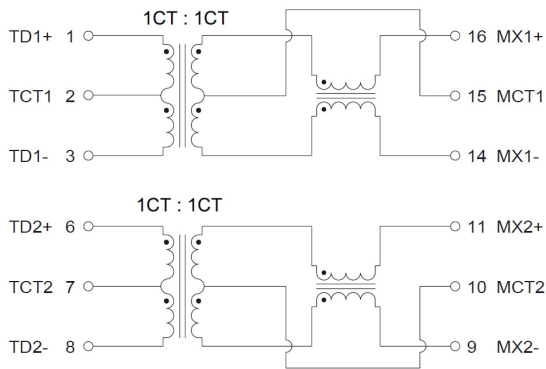


12.7 x 7.1 x 2.1 mm  
RoHS/RoHS II Compliant  
MSL = 1

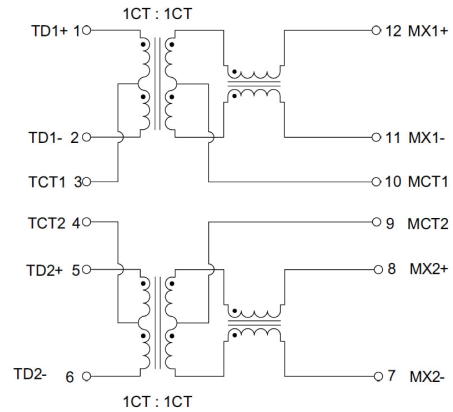
## Schematics

### 12-Pin

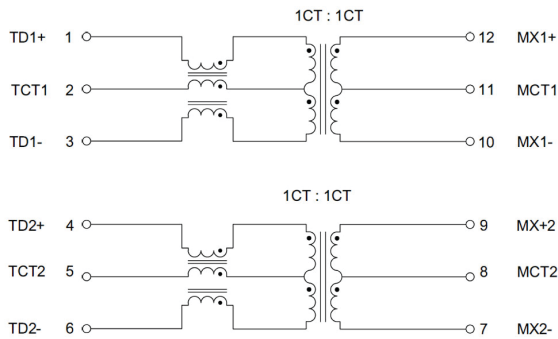
#### E10



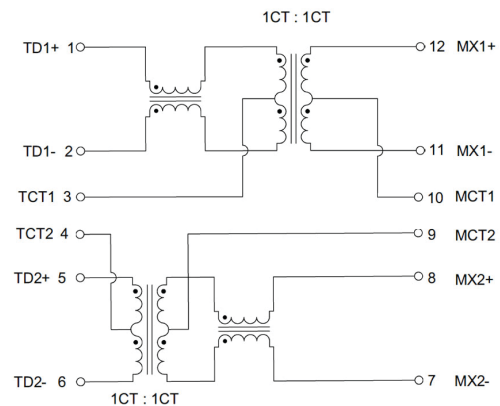
#### E12



#### E62



#### ED2



Contact Abracon for additional options.

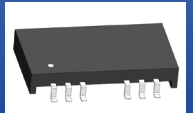


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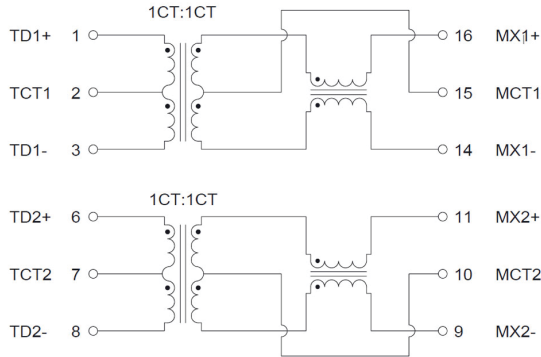


12.7 x 7.1 x 2.1 mm  
RoHS/RoHS II Compliant  
MSL = 1

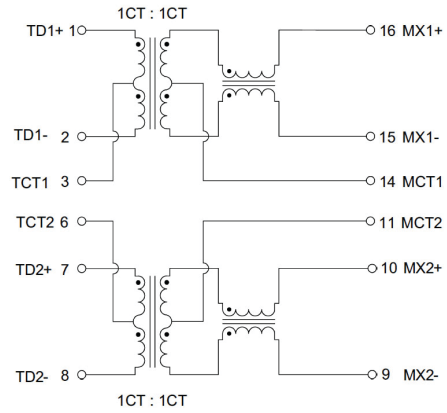
## Schematics

### 16-Pin

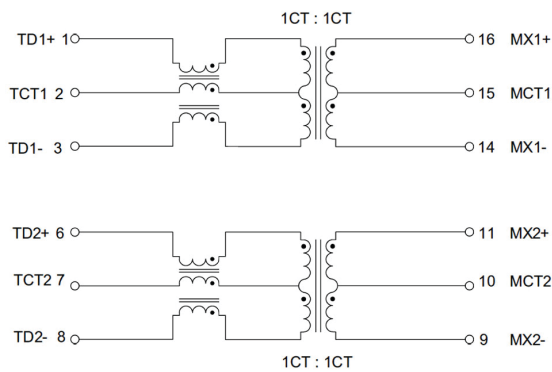
#### F10



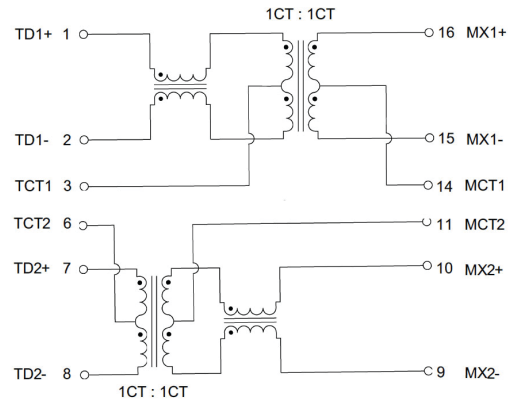
#### F12



#### F62



#### FD2



Contact Abracon for additional options.

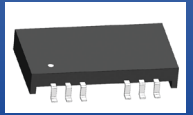


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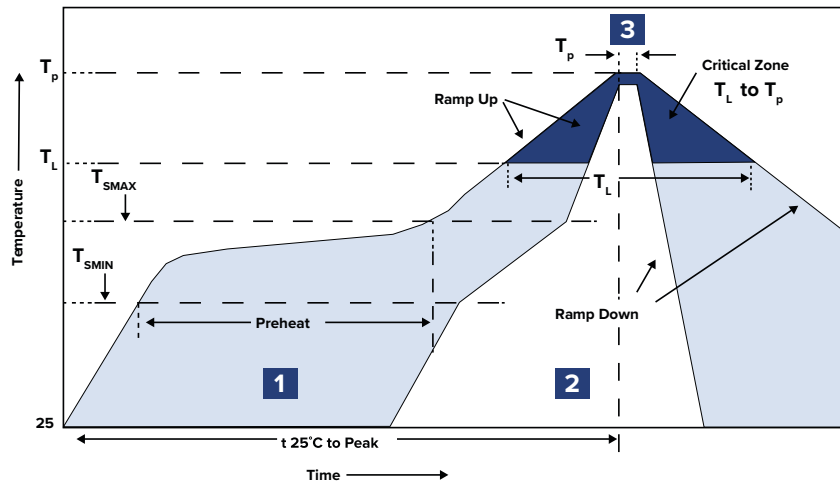


ALANL100X1



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

## Reflow Profile



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