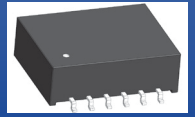


# 10/100 BASE-TX Single Port SMD LAN Transformer Module



ALANS100X1



14.8 x 11.7 x 5.0 mm  
12.8 x 6.9 x 5.6 mm  
RoHS/RoHS II Compliant  
MSL = 1

## Features

- Meets IEEE 802.3u standards
- Compatible with 10 BASE-T and 100 BASE-TX
- Operating temperature range up to -55°C to +125°C
- RoHS Compliant
- High performance magnetics for EMI suppression and common mode noise rejection
- Multiple schematic and pinout options 2.0mm and 1.27mm pin pitch for 12-pin and 16-pin package sizes
- 1CT:1CT TX and RX Transformers

## Applications

- Fast Ethernet
- Servers, switches and routers
- IP cameras, surveillance, and phone
- Access points
- Industrial computers and robotics
- Networking and communications
- Broadcast video
- Set top box

## Part Identification

ALANS100X1 - [ ] [ ] [ ] [ ]

Package Size
1: 12-Pin
2: 16-pin

Schematic	
12 pin	16 pin
E10	F10
E30	F30
E02	F02
E00	F00
*E82	*F82

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
*L: -55 °C to +125 °C

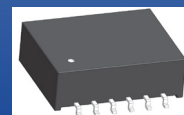
\*Operating temp. option L not available for schematic options E82 and F82

Packaging
B: Bulk
T: Tape and Reel**

\*\*Package size "1: 12-Pin": T= 400 pcs/reel

\*\*Package size "2: 16-pin": T= 700 pcs/reel

# 10/100 BASE-TX Single Port SMD LAN Transformer Module



ALANS100X1



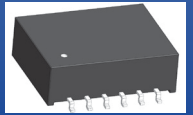
14.8 x 11.7 x 5.0 mm  
12.8 x 6.9 x 5.6 mm  
RoHS/RoHS II Compliant  
MSL = 1

## Electrical Specifications at 25°C

Part Number	Insertion Loss (dB Max)	Return Loss (dB Min)				Crosstalk (dB Min)			CMRR (dB Min)			DCMR (dB Min)		
	0.1-100 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
ALANS100X1-1E10	0.8	18	14	12	10	42	37	33	40	35	30	47	40	33
ALANS100X1-1E30	0.8	18	14	12	10	42	37	33	40	35	30	47	40	33
ALANS100X1-1E02	0.8	18	14	12	10	42	37	33	40	35	30	47	40	33
ALANS100X1-1E00	0.8	18	14	12	10	42	37	33	40	35	30	47	40	33
ALANS100X1-1E82	0.8	18	14	12	10	42	37	33	40	35	30	47	40	33
ALANS100X1-2F10	0.8	18	14	12	10	42	37	33	40	35	30	47	40	33
ALANS100X1-2F30	0.8	18	14	12	10	40	35	30	40	35	30	47	40	33
ALANS100X1-2F02	0.8	18	14	12	10	42	37	33	40	35	30	47	40	33
ALANS100X1-2F00	0.8	18	14	12	10	42	37	33	40	35	30	47	40	33
ALANS100X1-2F82	0.8	18	14	12	10	40	35	30	40	35	30	47	40	33

Part Number	Inductance (uH Min)	Leakage Inductance (uH Max)	Interwinding Capacitance (pF Max)	DC Resistance (Ω Max)		Hi Pot (VDC)
	@100kHz, 0.1V, 8mA DC Bias	@100kHz, 0.1V TD to MX	@100kHz, 0.1V TD to MX	Primary	Secondary	0.5mA/6 sec.
ALANS100X1-1E10	350	0.35	35	0.9	1.2	2500
ALANS100X1-1E30	350	0.35	35	0.9	1.2	2500
ALANS100X1-1E02	350	0.35	35	0.9	1.2	2500
ALANS100X1-1E00	350	0.35	35	0.9	1.2	2500
ALANS100X1-1E82	350	0.35	35	DCR(5-6):1.2	DCR(1-2,11-12,7-8):0.9	2500
ALANS100X1-2F10	350	0.35	35	0.9	1.2	2500
ALANS100X1-2F30	350	0.35	35	0.9	1.2	2500
ALANS100X1-2F02	350	0.35	35	0.9	1.2	2500
ALANS100X1-2F00	350	0.35	35	0.9	1.2	2500
ALANS100X1-2F82	350	0.35	35	DCR(7-8):1.2	DCR(1-2,16-15,10-9):0.9	2500

# 10/100 BASE-TX Single Port SMD LAN Transformer Module



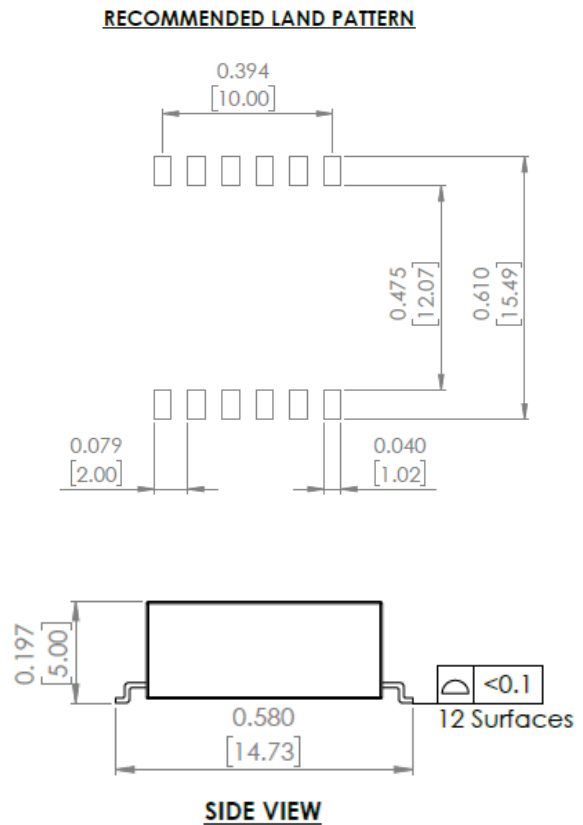
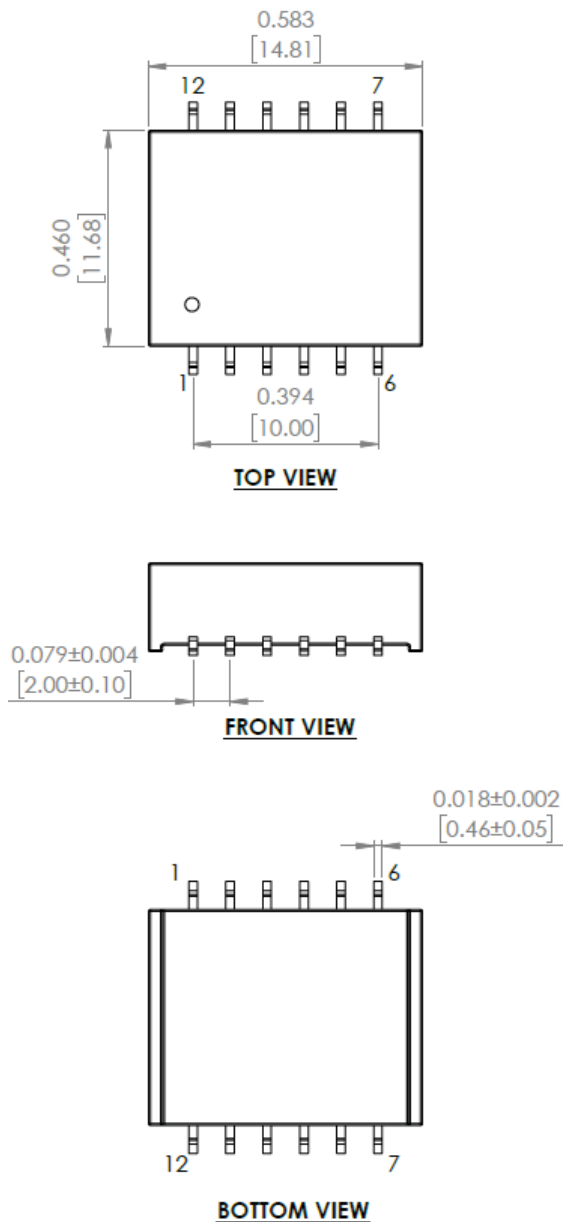
ALANS100X1



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12.8 x 6.9 x 5.6 mm  
RoHS/RoHS II Compliant  
MSL = 1

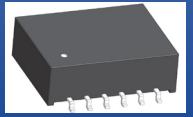
## Mechanical Dimensions

1: 12-pin



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

# 10/100 BASE-TX Single Port SMD LAN Transformer Module



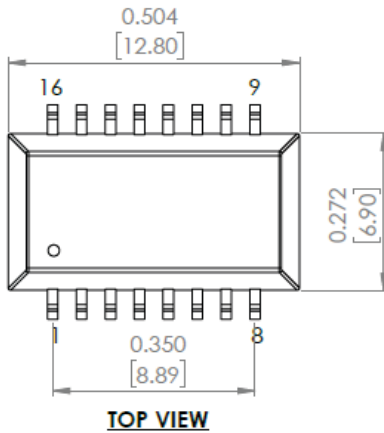
ALANS100X1



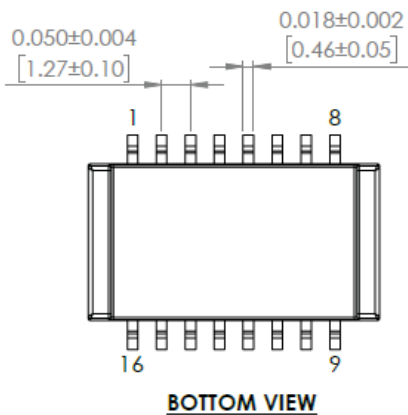
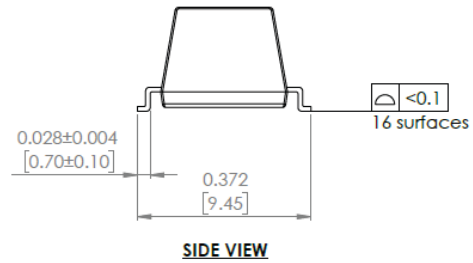
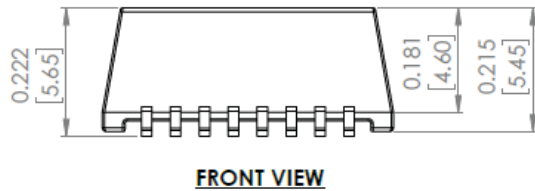
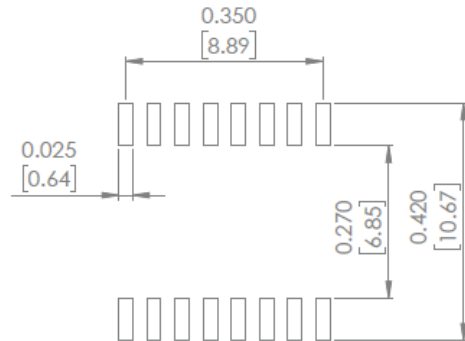
14.8 x 11.7 x 5.0 mm  
12.8 x 6.9 x 5.6 mm  
RoHS/RoHS II Compliant  
MSL = 1

## Mechanical Dimensions

2: 16-pin

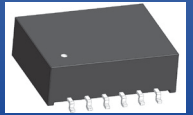


### RECOMMENDED LAND PATTERN



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

# 10/100 BASE-TX Single Port SMD LAN Transformer Module



ALANS100X1

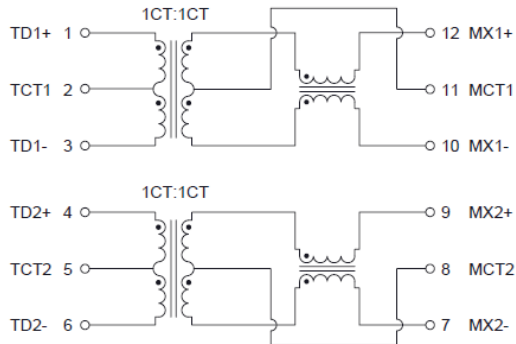


14.8 x 11.7 x 5.0 mm  
12.8 x 6.9 x 5.6 mm  
RoHS/RoHS II Compliant  
MSL = 1

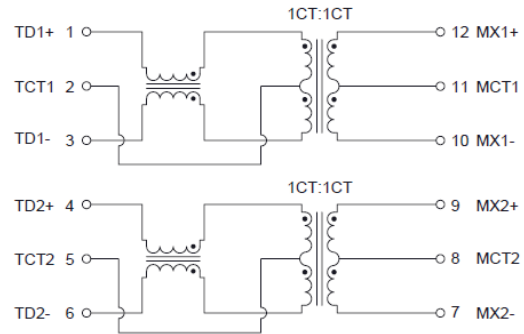
## Schematics

### 12-Pin

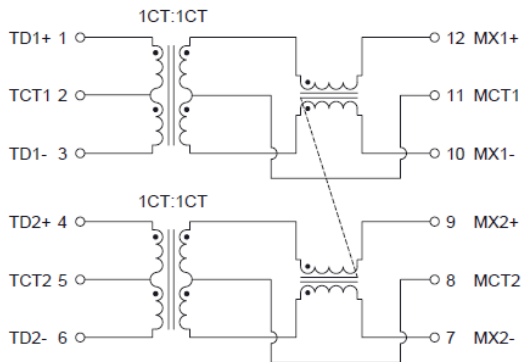
#### E10



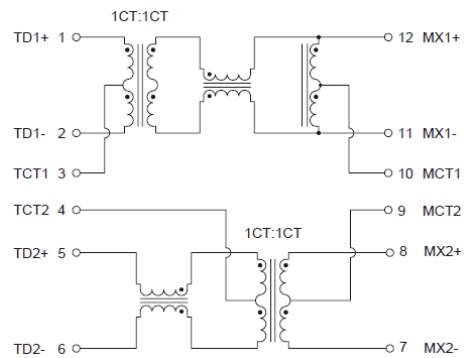
#### E00



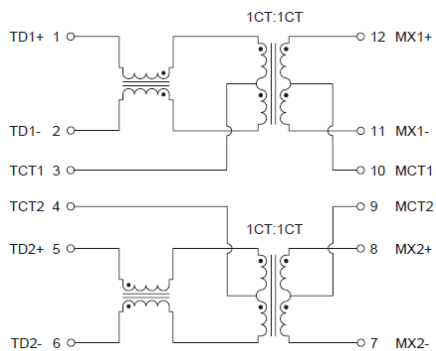
#### E30



#### E82



#### E02



Contact Abracon for additional options.

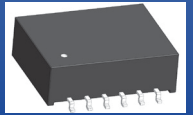


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# 10/100 BASE-TX Single Port SMD LAN Transformer Module



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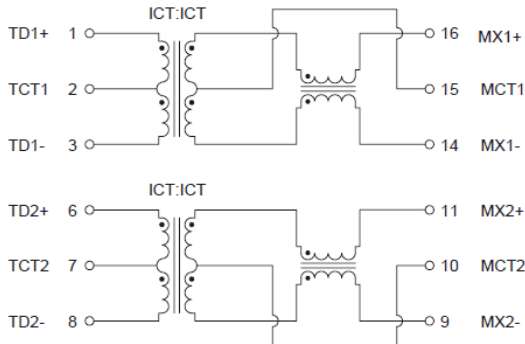


14.8 x 11.7 x 5.0 mm  
12.8 x 6.9 x 5.6 mm  
RoHS/RoHS II Compliant  
MSL = 1

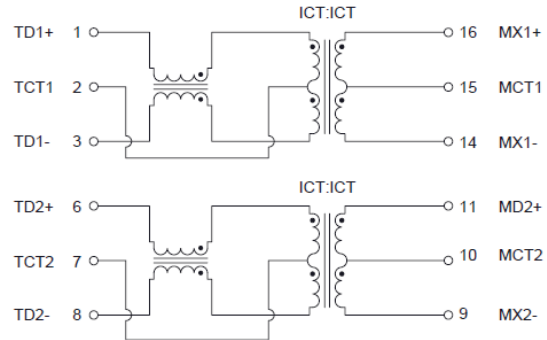
## Schematics

### 16- Pin

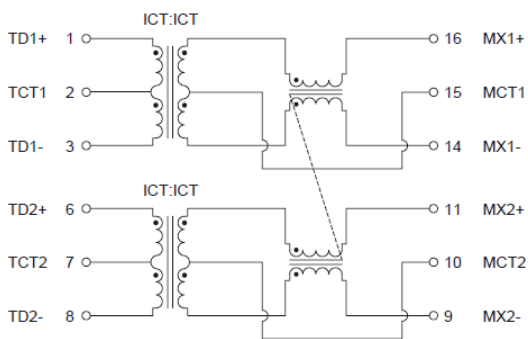
#### F10



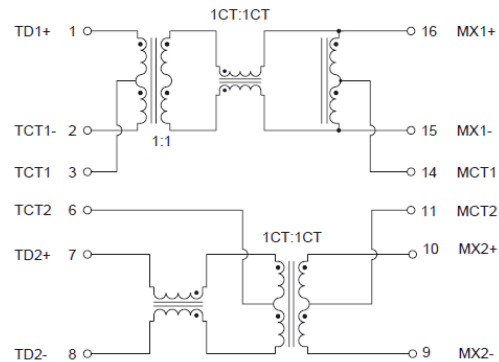
#### F00



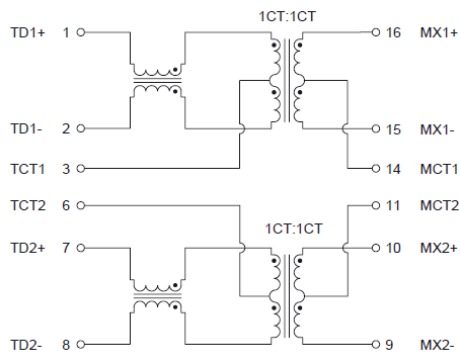
#### F30



#### F82



#### F02



Contact Abracon for additional options.

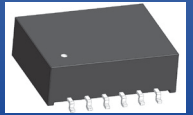


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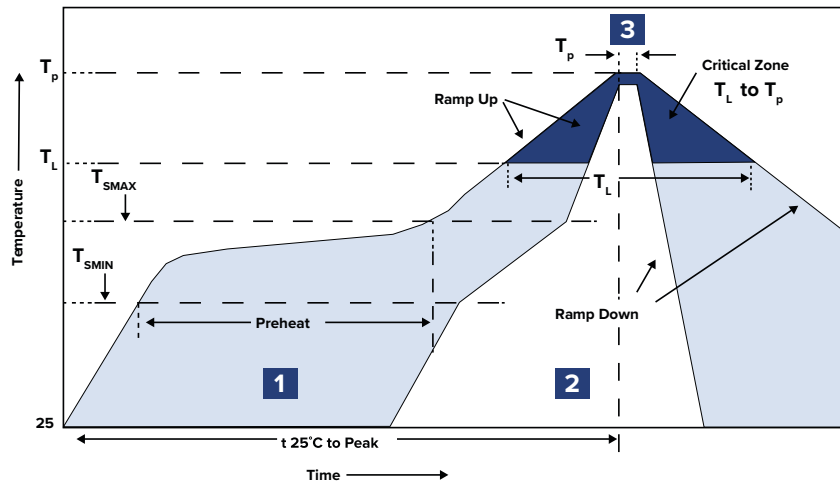


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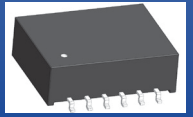
14.8 x 11.7 x 5.0 mm  
12.8 x 6.9 x 5.6 mm  
RoHS/RoHS II Compliant  
MSL = 1

## Reflow Profile



Zone	Description	Temperature	Time
1	Preheat / Soak	$T_{SMIN} \sim T_{SMAX}$ 150°C ~ 180°C	60 ~ 120 sec.
2	Reflow	$T_L$ 217°C	30 ~ 40 sec.
3	Peak heat	$T_P$ 245°C ± 5°C	10 sec. MAX

# 10/100 BASE-TX Single Port SMD LAN Transformer Module



ALANS100X1



14.8 x 11.7 x 5.0 mm  
12.8 x 6.9 x 5.6 mm  
RoHS/RoHS II Compliant  
MSL = 1

## Packaging

### Package size option 1:

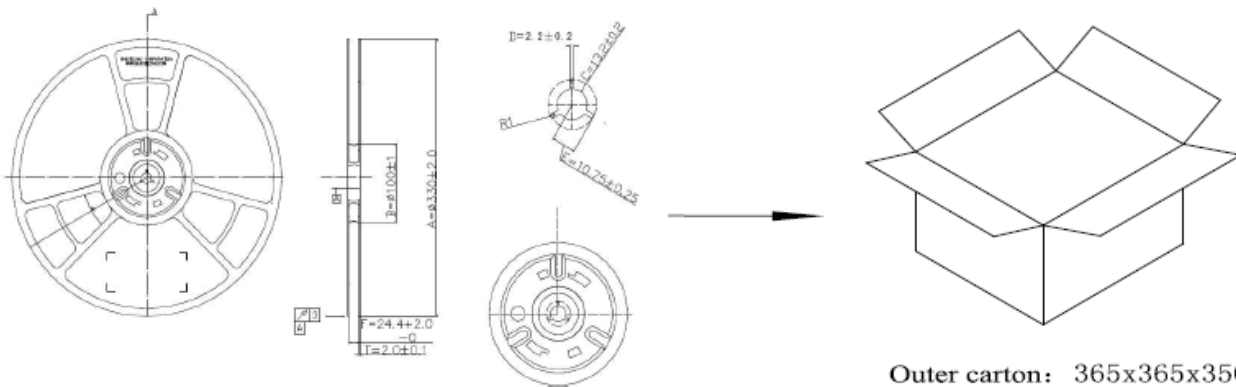
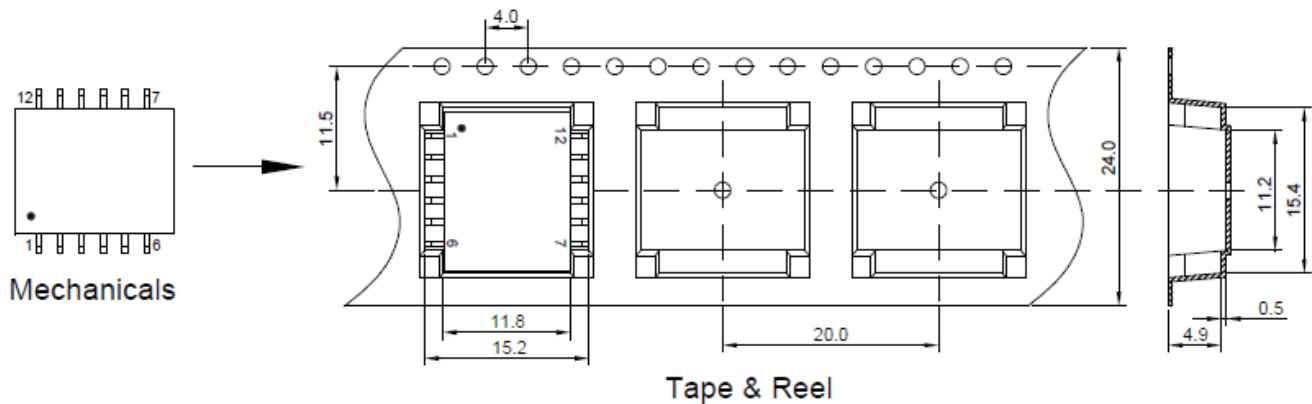
Tape and Reel: 400 pcs/reel

Pieces per Carton: 4000

T&R per Carton: 10

Weight per Carton: 9.5kg

Weight per Piece: 1.0g



Outer carton: 365x365x350mm

Dimensions: mm



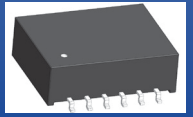
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# 10/100 BASE-TX Single Port SMD LAN Transformer Module



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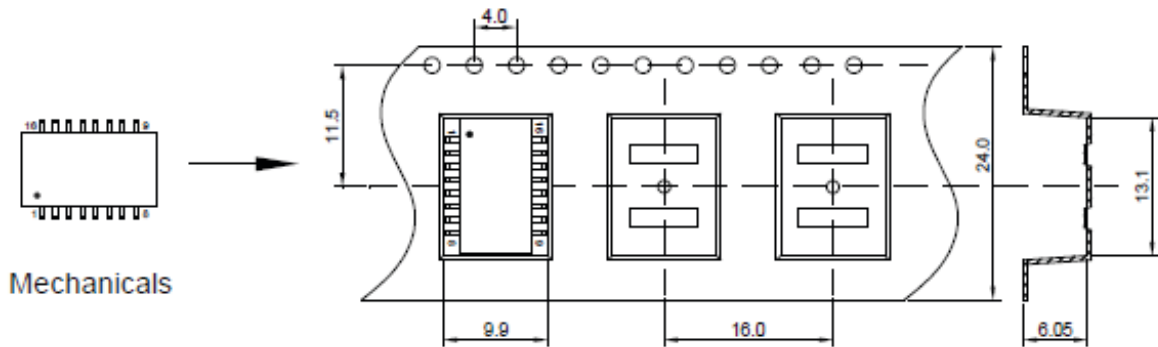


14.8 x 11.7 x 5.0 mm  
12.8 x 6.9 x 5.6 mm  
RoHS/RoHS II Compliant  
MSL = 1

## Packaging

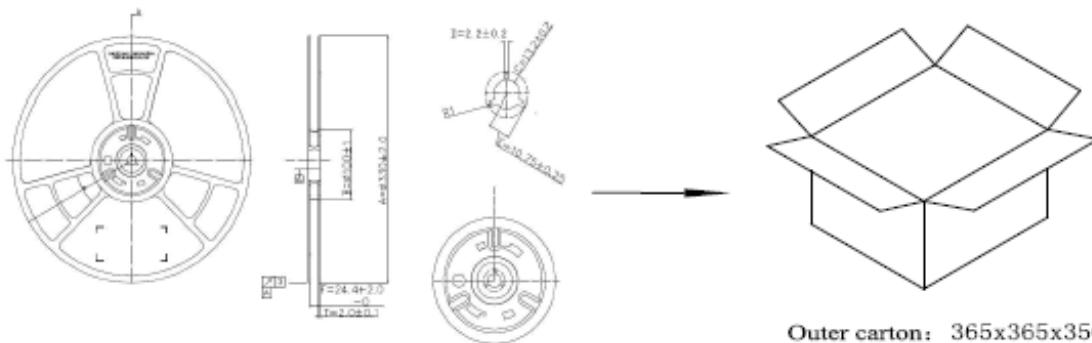
### Package size option 2:

Tape and Reel: 700 pcs/reel  
Pieces per Carton: 7000  
T&R per Carton: 10  
Weight per Carton: 10.5kg  
Weight per Piece: 0.7g



Mechanicals

Tape & Reel



Outer carton: 365x365x350mm

Dimensions: mm

**ATTENTION:** Abracon LLC's products are COTS – Commercial-Off-The-Shelf products; suitable for Commercial, Industrial and, where designated, Automotive Applications. Abracon's products are not specifically designed for Military, Aviation, Aerospace, Life-dependent Medical applications or any application requiring high reliability where component failure could result in loss of life and/or property. For applications requiring high reliability and/or presenting an extreme operating environment, written consent and authorization from Abracon LLC is required. Please contact Abracon LLC for more information.



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