# 100/1000 Base-T Single Port LAN Transformer w/ PoE+, 3 Wires Extended Temperature

## **ALAN-2302**

## **RoHS/RoHS II Compliant**



#### > FEATURES:

- Meet IEEE802.3 specification
- Power Over Ethernet(PoE+)IEEE802.3at compliant performance
- Extended Temperature (-40°C +85°C)
- ROHS peak reflow temperature rating 245°C
- 1500Vrms Hi-Pot

#### **APPLICATIONS:**

- Designed for most leading PHY IC manufacturers such as Broadcom, Marvell, Micrel, & Microsemi
- 1000Base-T Ethernet-LAN
- 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:

Key Electrical Specifications @ 25°C

Parameters	Minimum	Typical	Maximum	Units	Notes
Operating Temperature	-40		+85	°C	
Storage Temperature	-40		+85	°C	
Turn Ratio (± 5%)		1CT:1CT			
Inductance (OCL)	350			μН	100KHz/0.1V@8mA
Leakage Inductance (LL)			0.5	μН	100KHz/0.1V
Cw/w			30	pF	100KHz/0.1V
DC Resistance			1.2	Ω	
Insertion Loss			-1.1	dB	0.1MHz
			-1.0		100MHz
			-2.0		125MHz
Return Loss	-18			dB	30MHz
	-14.4				40MHz
	-12				80MHz
	-10				100MHz
Cross Talk		-41		dB	30MHz
		-37			60MHz
		-33			100MHz
Differential to Common Mode Rejection	-30			dB	1-100MHz
Common Mode Rejection	-30			dB	1-100MHz
PoE Current Capacity			750	mA	
Hi-Pot	1500Vrms/0.5mA/60Sec or 1650Vrms/0.5mA/2Sec				



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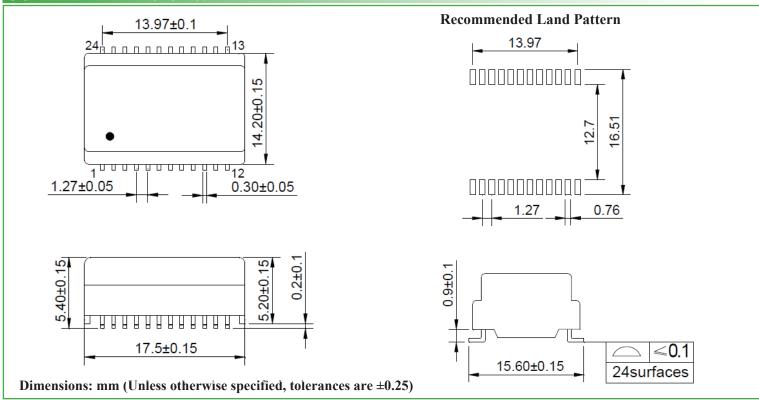
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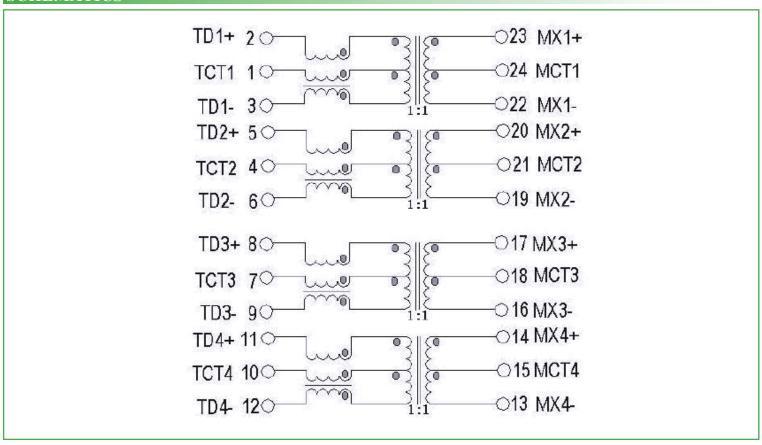
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### **OUTLINE DIMENSIONS:**



### > SCHEMATICS







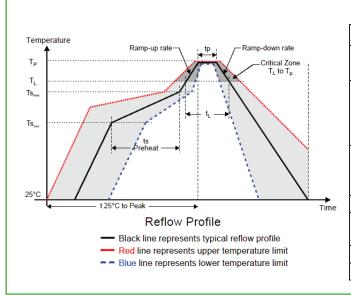
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#### REFLOW PROFILE:



Profile Feature	Pb-Free Assembly		
Average Ramp-Up Rate	3°C /second max.		
(Ts <sub>max</sub> to Tp)			
Preheat			
-Temperature Min (Ts min)	150°C		
-Temperature Max (Ts <sub>max</sub> )	200°C		
-Time (ts <sub>min</sub> to ts <sub>max</sub> )	60-120 seconds		
Time maintained above:			
-Temperature (T <sub>L</sub> )	217°C		
-Time $(t_L)$	60-150 seconds		
Peak/Classification Temperature (Tp)	245+0/-5°C		
Time within 5°C of actual Peak	20-40 seconds		
Temperature (tp)			
Ramp-Down Rate	6°C /seconds max		
Time 25°C to Peak Temperature	8 minutes max.		

#### **►** TAPE & REEL:

Packing: 400 pcs / reel
Weight 2.1 grams / pcs

Tape & Reel

Dimensions: mm

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