



TAOGLAS®



Datasheet

LAN Transformer 10/100 Base-T PoE++

Part No:
TM41654ANL

Description:

10/100 Base-T transformer
Single Port and 16pin SMT

Features:

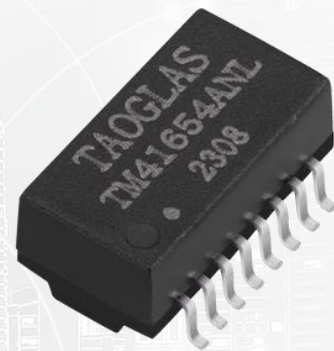
PoE++
3 Wire + Transformer
Industrial grade

1. Introduction	3
2. Specifications	4
3. Mechanical	5
4. Electrical	6
5. Packaging	7
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Changelog	8

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1. Introduction



Featuring a compatible footprint with industry LAN transformers, and designed to work in demanding industrial environmental conditions, the Taoglas TM41654ANL is a 10/100Base-T Single Port of 16pin with 3 Wire and Transformer which makes it suitable for PoE++ (720mA) applications.

Typical applications for this cost-effective part are:

- Industrial Automation
- Hubs
- Routers
- Switches
- Wireless Access Points

The Taoglas Magnetics Product Team have over fifteen years of LAN magnetics design and high-quality manufacturing. With an ever-expanding portfolio, we provide trusted products and services to customers within a wide range of applications such as: Networking and Interconnect Devices, Servers, Switches, Router, Communication systems and any Digital Consumer electronics.

The Taoglas Exos Series offer an extensive product line of LAN Transformers designed for commercial and industrial grade applications, supporting 10/100 Base-T (Exos100 Series), 1G Base-T (Exos1G Series) and 10G Base-T (Exos10G Series). These products include Single, Dual, and Quad configurations not only for standard applications but also for Power over Ethernet (PoE, PoE+, PoE++).

For more information on the range of products or for assistance with integration, contact your regional Taoglas customer support team.

2. Specifications

Electrical Performance @25°C	
Inductance OCL	350uH MIN @ 100KHz,0.1V,8mA DC Bias
	120uH MIN @ 100KHz,0.1V,19mA DC Bias
Turns Ratio (±2%)	TX=1CT: 1CT RX=1CT: 1CT
Insertion Loss	0.1-100 MHz: -1.2dB MAX
	1-125 MHz: -0.2-0.002*f^1.4 dB MAX
Return Loss (dB Min @100Ω±15Ω)	0.1-30 MHz: -16
	30-60 MHz: -10+20*LOG10(f/60 MHz)
	60-80 MHz: -10
Crosstalk (dB Min)	1 MHz: -50
	10-100 MHz: -55+22*LOG10(f/10)
CMRR (dB Min)	2 MHz: -45
	30-200 MHz: -7+28*LOG10(f/200)
DC Current Rating	720mA DC Max @57V
Hi-Pot	1500Vrms Min

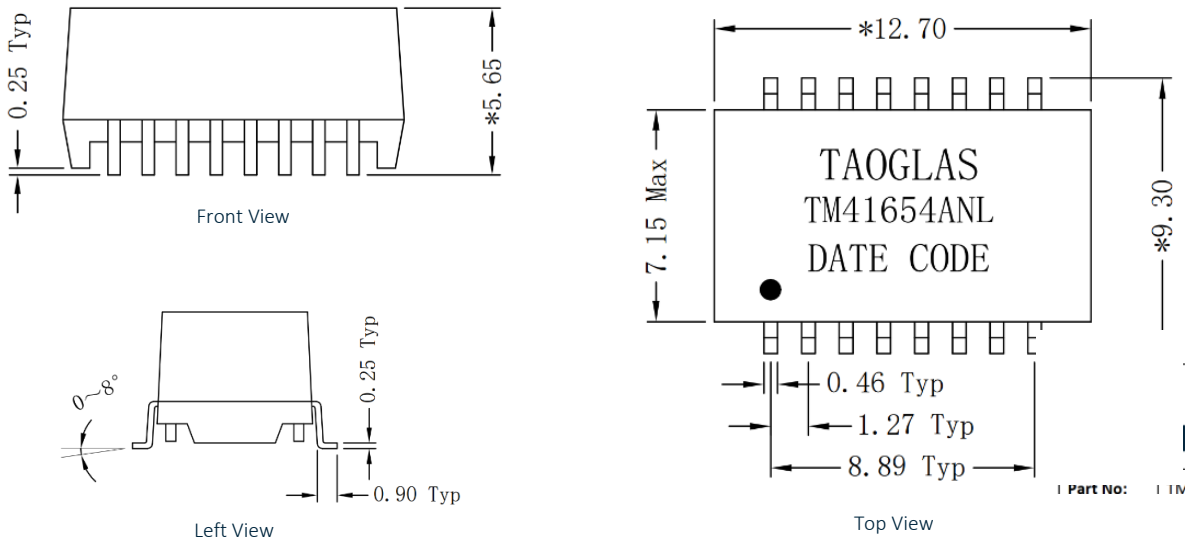
Environmental Specifications	
Operating Temperature	-40°C TO +85°C

Compliance	
UL recognized - FILE NO. E528697	
RoHS Compliant	

Storage requirements	
Humidity	MSL - 1
Storage Temperature	-40°C TO +85°C

3. Mechanical

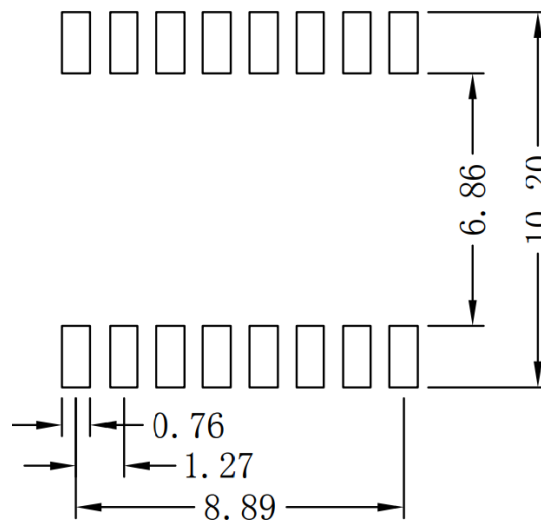
3.1 Mechanical Drawings



Mechanical Specifications	
Length	12.7 mm
Width	9.3 mm
Height	5.65 mm
Mounting Style	Surface Mount (SMT)

Dimensions are in millimeters with the following tolerances: X.XX = ±0.25

3.2 Pad Layout

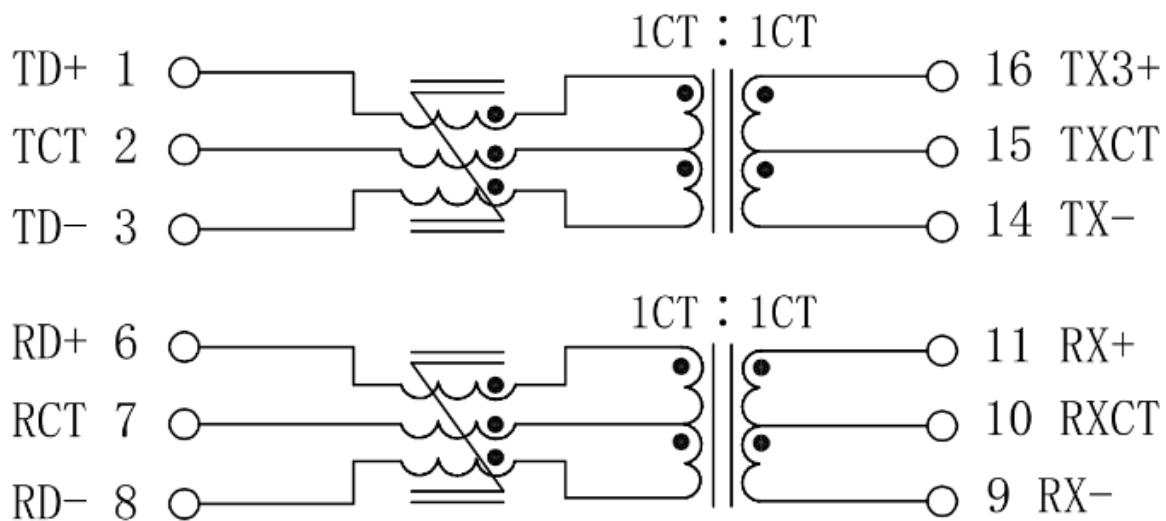


Suggested pad layout

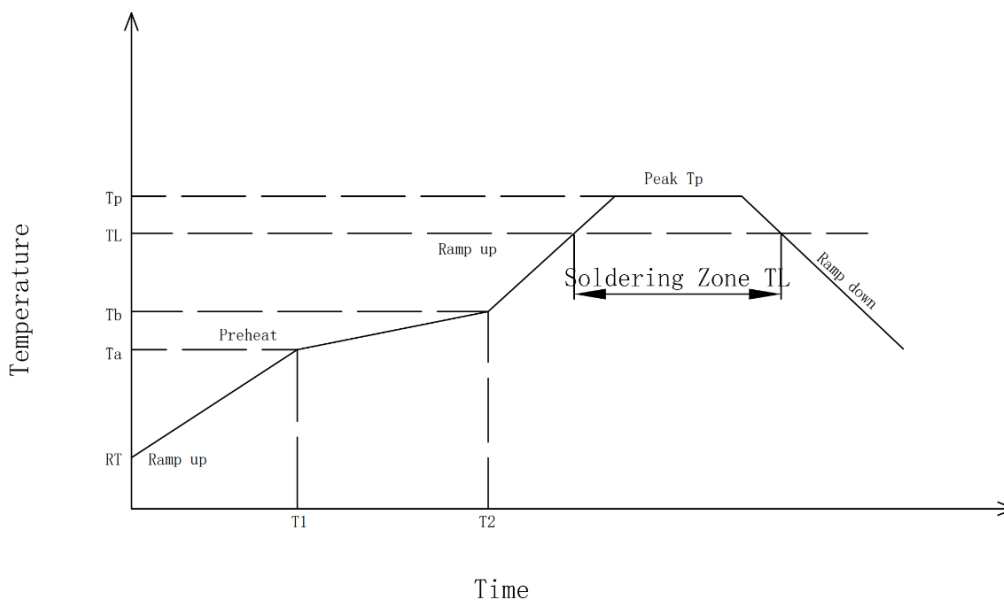
Dimensions are in millimeters with the following tolerances: X.XX = ±0.10

4. Electrical

4.1 Electrical Drawings



4.2 Profile of Reflow Solder



Preheat :
 Temperature (Ta-Tb):150-200°C
 Time(T1-T2):60-180s

Holding Temperature:217°C
 Time (TL):60-150s

Max Temperature (Tp):250(+0/-5°C)
 Max Time (Tp):30Sec±10Sec

The average speed:3°C/S Max
 The average cooling speed:6°C/S Max

From 25°C to Products out of the furnace:6 minutes Max

5. Packaging

5.1 SPQ

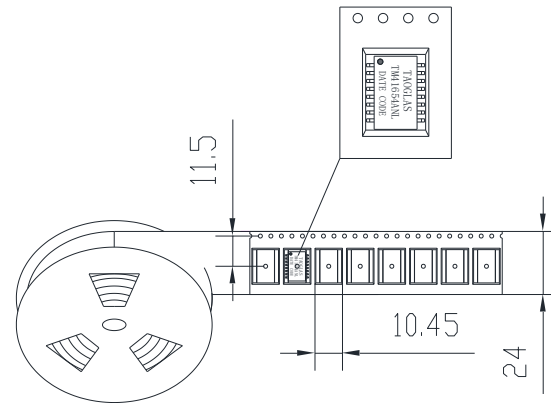
1 reel = 650 pcs

A (Carrier Tape Width): 24 ± 0.3 mm

B (Sprocket hole to Cavity center): 11.5 ± 0.2 mm

C (Cavity width): 10.45 ± 0.2 mm

1 PCS/ Vacuum bag



1 Carton = 6 reels = 3900 pcs

Carton dimensions: 370*370*250 mm

Carton Weight: 6 kg



5.2 Label

Taoglas Limited	
P/N NO: XXXXXXXX	
QYT: XXX PCS	DC: XXXX
DATE: XXXX-XX-XX	

SPQ Label (8x4cm)

Taoglas Limited	
P/N NO: XXXXXXXX	
PO: XXXXXXXX	B/N: XXXXXXXX
QYT: XXX PCS	DC: XXXX
DATE: XXXX-XX-XX	

Carton Label (8x4cm)

Changelog

Changelog for the datasheet

SPE-23-8-051 – TM41654ANL

Revision: A (Original First Release)

Date:	2023-03-30
Notes:	
Author:	Javier Vasena

Previous Revisions



www.taoglas.com

