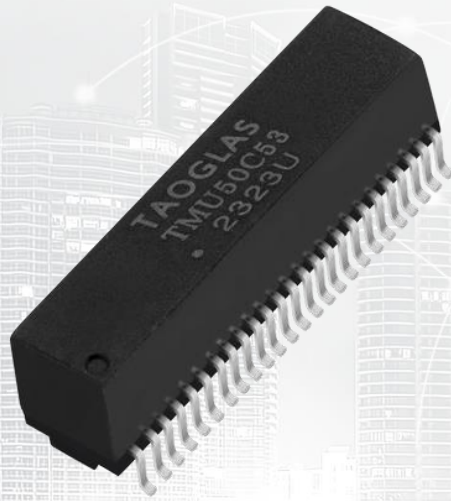




TAOGLAS®



Datasheet

LAN Transformer Dual 1G Base-T PoE

Part No:
TMU50C53

Description:

Dual 1G Base-T transformer
Single Port and 50pin SMT

Features:

PoE (350mA)
Transformer + CMC
Industrial grade

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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 TMU50C53 is a Dual 1G Base-T Single Port of 50pin with Transformer and Common Mode Choke designed for PoE (350mA) 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 with 8mA DC Bias
Turns Ratio (±2%)	1CT:1CT
Power over Ethernet (PoE)	DC Current 350mA@ 70°C, Power Supported 35W with PSE (4 pair UTP)
Insertion Loss	-1.2dB @ 1-100kHz
	-0.5dB @ 1-100MHz
	-1.0dB @ 125MHz
Return Loss	-18dB @ 1-40MHz
	-13dB @ 60-80MHz
	-11dB @ 100MHz
CMRR	-50dB @ 2MHz
	-20dB @ 30-100MHz
	-15dB @ 200MHz
Hi-Pot	1500Vrms/60s

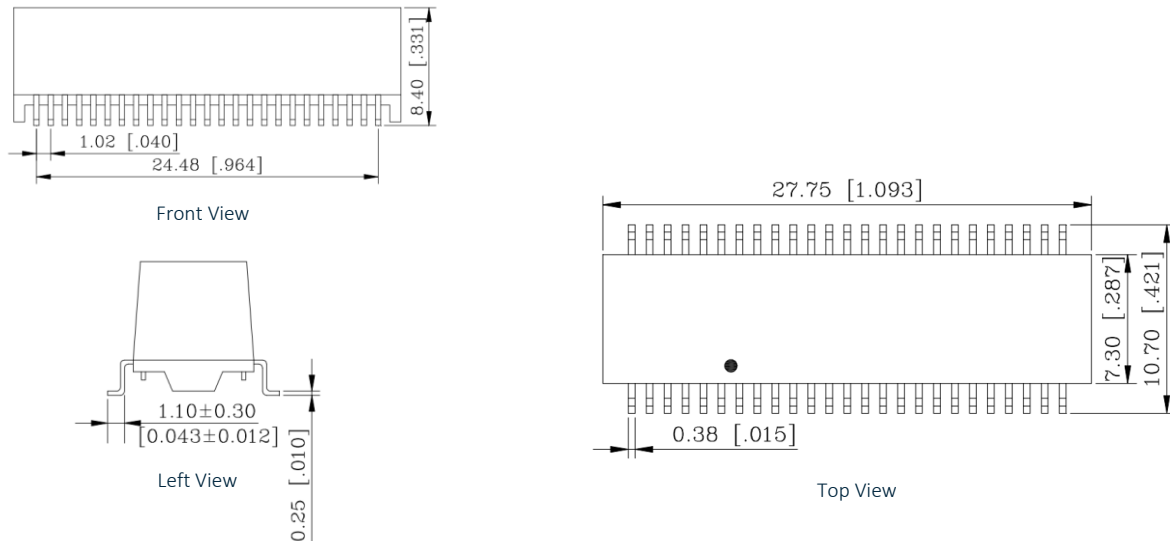
Environmental Specifications	
Operating Temperature	-40°C TO +85°C

Compliance	
RoHS Compliant	

Storage requirements	
Humidity	MSL - 1
Storage Temperature	-25°C TO +85°C

3. Mechanical

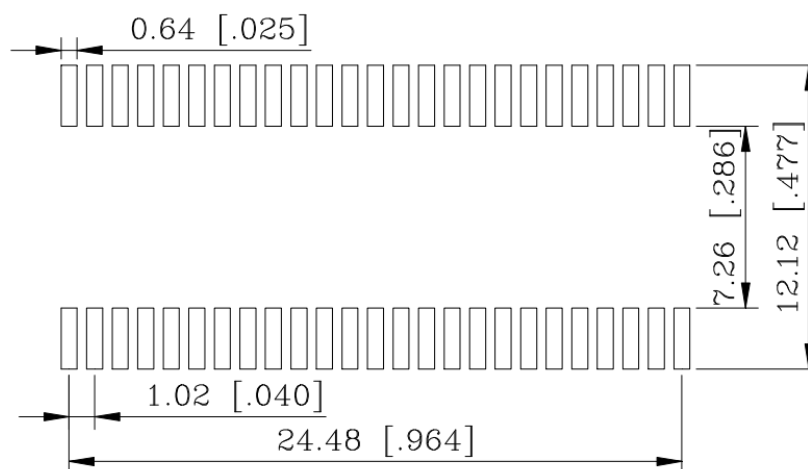
3.1 Mechanical Drawings



Mechanical Specifications	
Length	27.75 mm
Width	10.70 mm
Height	8.4 mm
Mounting Style	Surface Mount (SMT)

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

3.2 Pad Layout

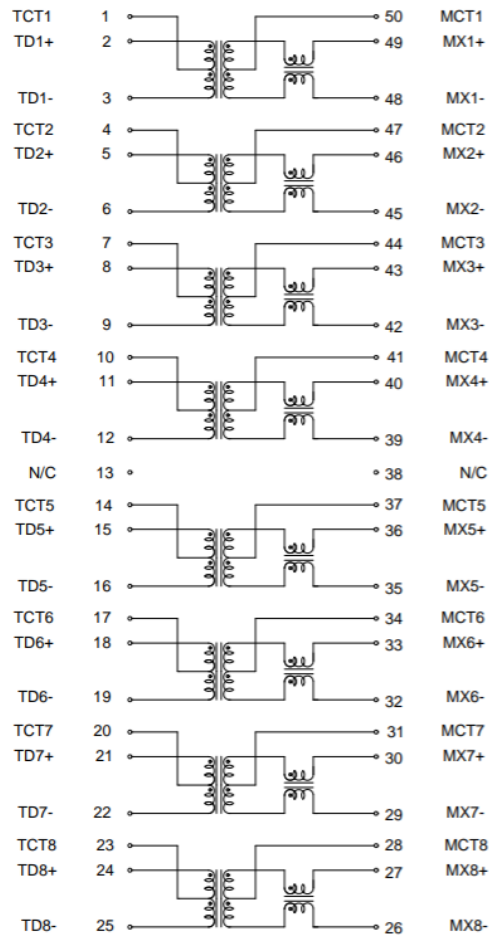


Suggested pad layout

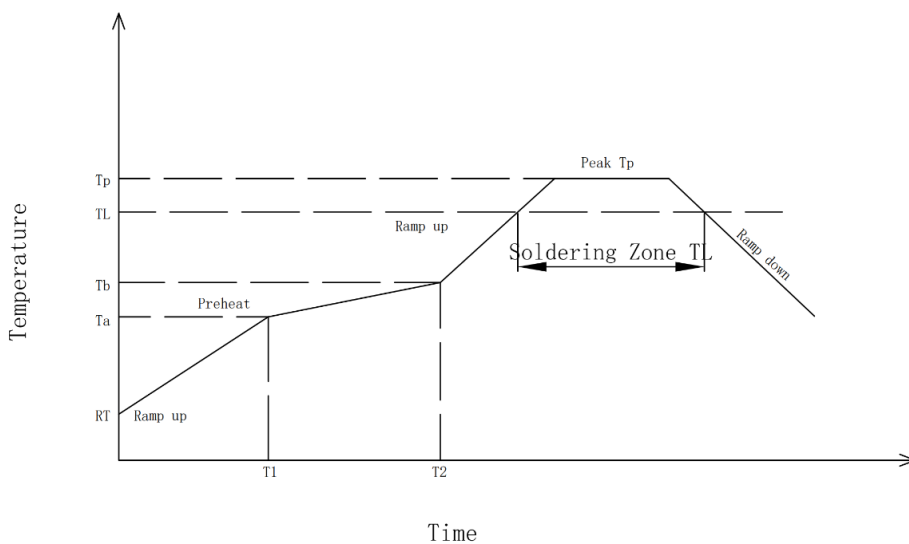
Dimensions are in millimeters with the following tolerances: X.XX = ±0.10

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

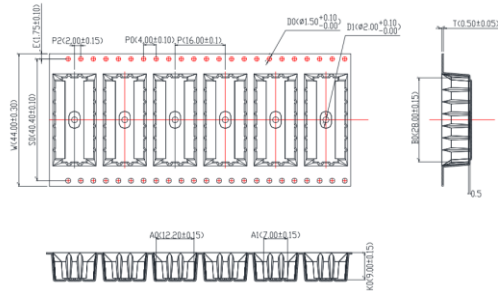
5. Packaging

5.1 SPQ

1 reel = 450 pcs

Reel (mm): 44x28x9

Weight (gr): 1800



1 Carton = 5 reels = 2250 pcs

Carton dimensions: 373*365*284 mm

Carton Weight: 9.1 kg



5.2 Label

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

SPQ Label (8x5cm)

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

Carton Label (8x5cm)

Changelog

Changelog for the datasheet

SPE-23-8-170 – TMU50C53

Revision: A (Original First Release)

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

Previous Revisions



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