



TAOGLAS®



Datasheet

LAN Transformer 1G Base-T PoE Ultra

Part No:
TMU24C14U

Description:

1G Base-T transformer
Single Port and 24pin SMT

Features:

PoE Ultra
3Wire + Transformer
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 TMU24C14U is a 1G Base-T Single Port of 24pin with 3Wire and Transformer which makes it suitable for PoE Ultra (1100mA) applications in Industrial environments.

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 18mA DC Bias |
| Turns Ratio (±3%) | TX=1CT: 1CT RX=1CT: 1CT |
| LK: | 0.5uH Max @100KHz/0.2V |
| Cw/w | 35PF Max @100KHz/0.2V |
| D.C.R: | 1.2-ohm Max |
| Insertion Loss | -1.5dB Max@1-250MHz |
| | -3.0dB Max@250-500MHz |
| Return Loss | 1-40MHz: -16dB Min |
| | 40-100MHz: -10+20*log(f/80) dB Min |
| Crosstalk | 1-100MHz: -30dB Min |
| CMRR | 1-100MHz: -30dB Min |
| DC Current Rating | 1100mA DC Max @57V |
| Hi-Pot | 1500Vrms |

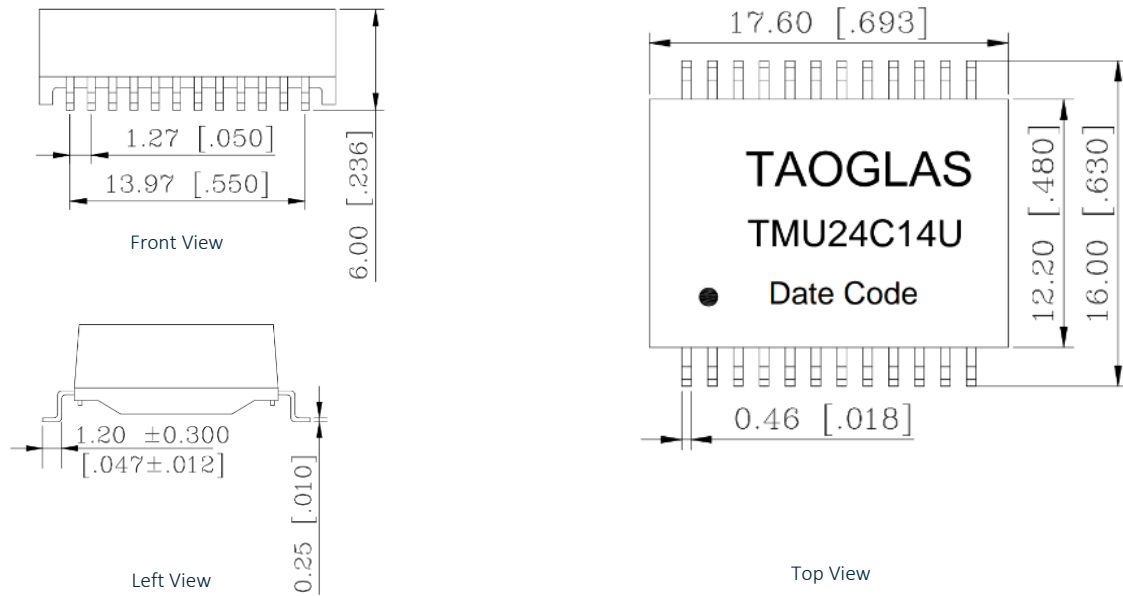
| Environmental Specifications | |
|------------------------------|----------------|
| Operating Temperature | -40°C TO +85°C |

| Compliance | |
|----------------------------------|--|
| UL recognized - FILE NO. E528697 | |
| RoHS Compliant | |

| Storage requirements | |
|----------------------|-----------------|
| Humidity | MSL - 1 |
| Storage Temperature | -40°C TO +125°C |

3. Mechanical

3.1 Mechanical Drawings

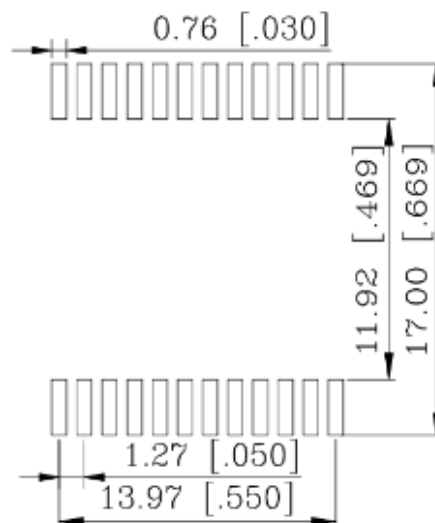


Mechanical Specifications

| | |
|----------------|---------------------|
| Length | 17.6 mm |
| Width | 16 mm |
| Height | 6 mm |
| Mounting Style | Surface Mount (SMT) |

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

3.2 Pad Layout

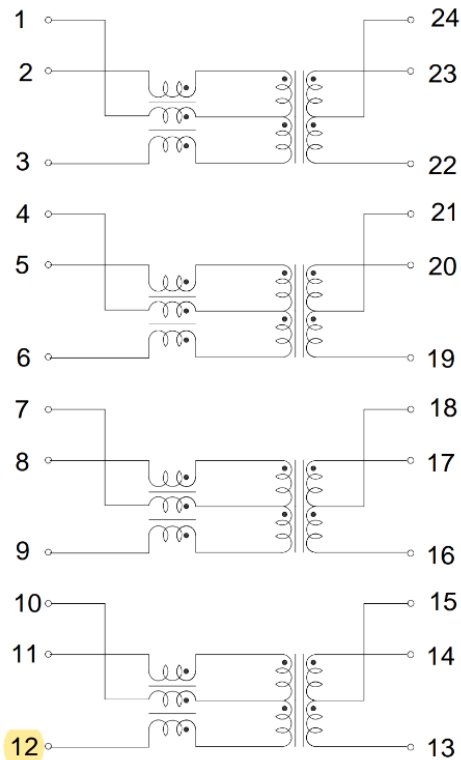


Suggested pad layout

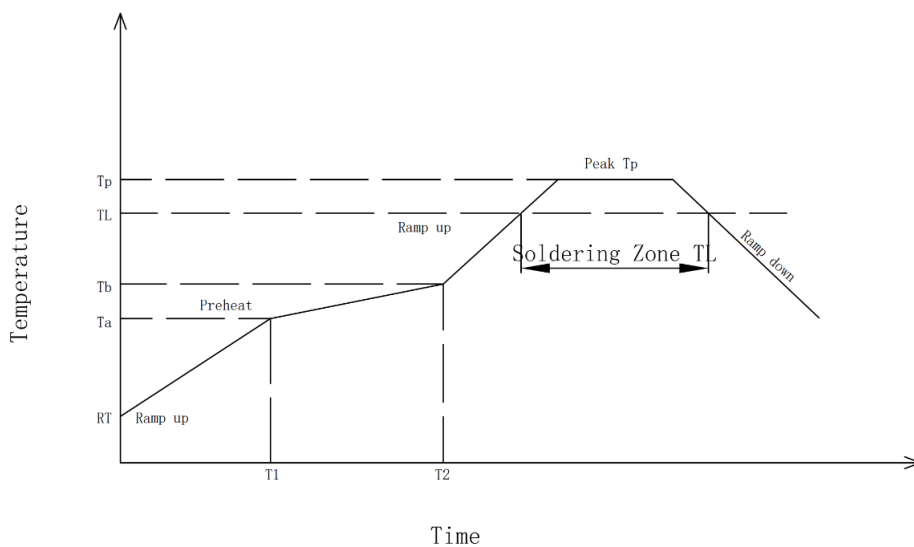
Dimensions are in millimeters with the following tolerances: X.XX = ± 0.10

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

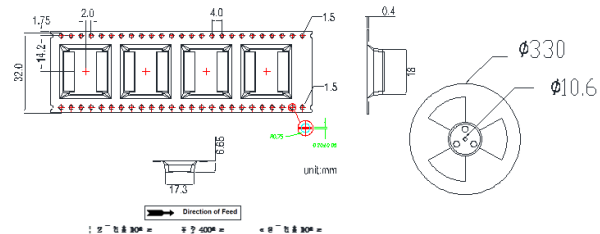
5. Packaging

5.1 SPQ

1 reel = 400 pcs

Reel (mm): 32x14.2x17.3

Weight (gr): 950



1 Carton = 7 reels = 2800 pcs

Carton dimensions: 373*365*284 mm

Carton Weight: 8.05kg



5.1 SPQ

| | |
|------------------|----------|
| 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-23-8-054 – TMU24C14U

Revision: A (Original First Release)

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

Previous Revisions

| | |
|--|--|
| | |
| | |



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