



# TAOGLAS®



# Datasheet

## LAN Transformer 10/100 Base-T

**Part No:**  
TMU16A02W

### Description:

10/100 Base-T Transformer  
Single port and 16 pin SMT

### Features:

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 TMU16A02W is a LAN Transformer 10/100 Base-T Single Port of 16pins.

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 |  |
|------------------------------|--|
| OCL                          | 350μH Min. @100KHz/0.1V with 8mA DC Bias |
| Turns Ratio (±3%)            | 1CT: 1CT                                 |
| LK                           | 0.5μH Max @100KHz/0.2V                   |
| Cw/w                         | 35PF Max @100KHz/0.2V                    |
| D.C.R:                       | 1.2 ohm Max                              |
| Insertion Loss               | 1-100MHz: -1.0dB Max                     |
| Return Loss                  | 1-30MHz: -16dB Min                       |
|                              | 30-60MHz: -16+20 log(f/30) dB Min        |
|                              | 60-80MHz: -10dB Min                      |
| CMRR                         | 1-100MHz: -30dB Min                      |
| Cross Talk                   | 1-100MHz: -30dB Min                      |
| Hi-Pot                       | 1500Vrms                                 |

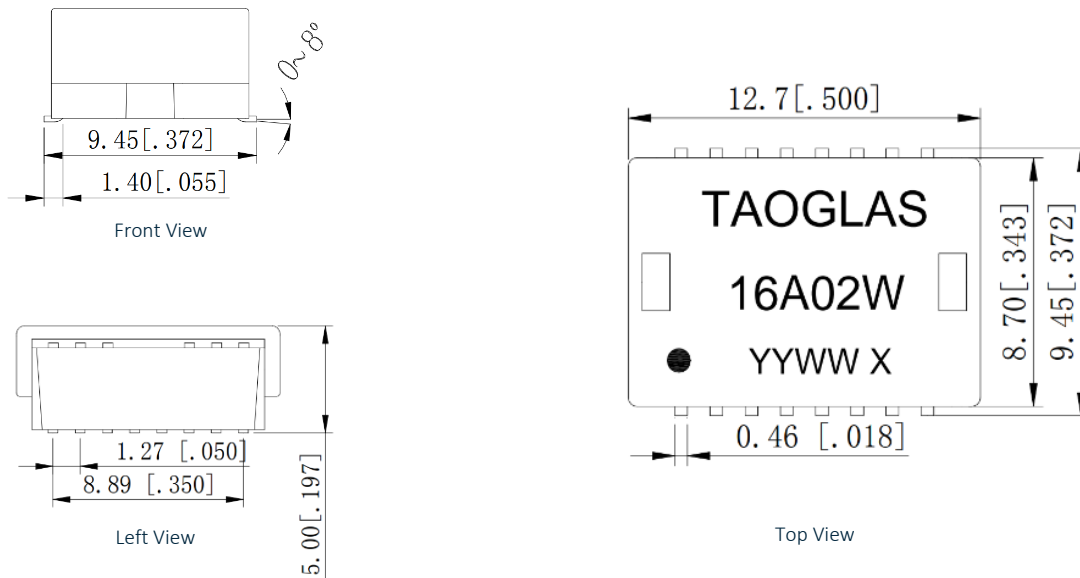
| Environmental Specifications |                |
|------------------------------|----------------|
| Operating Temperature        | -40°C TO +85°C |

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

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

### 3. Mechanical

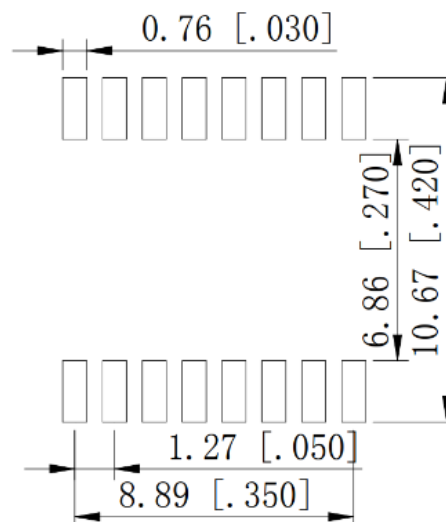
#### 3.1 Mechanical Drawings



| Mechanical Specifications |                     |
|---------------------------|---------------------|
| Length                    | 12.70 mm            |
| Width                     | 9.45 mm             |
| Height                    | 5.00 mm             |
| Mounting Style            | Surface Mount (SMT) |

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

#### 3.2 Pad Layout

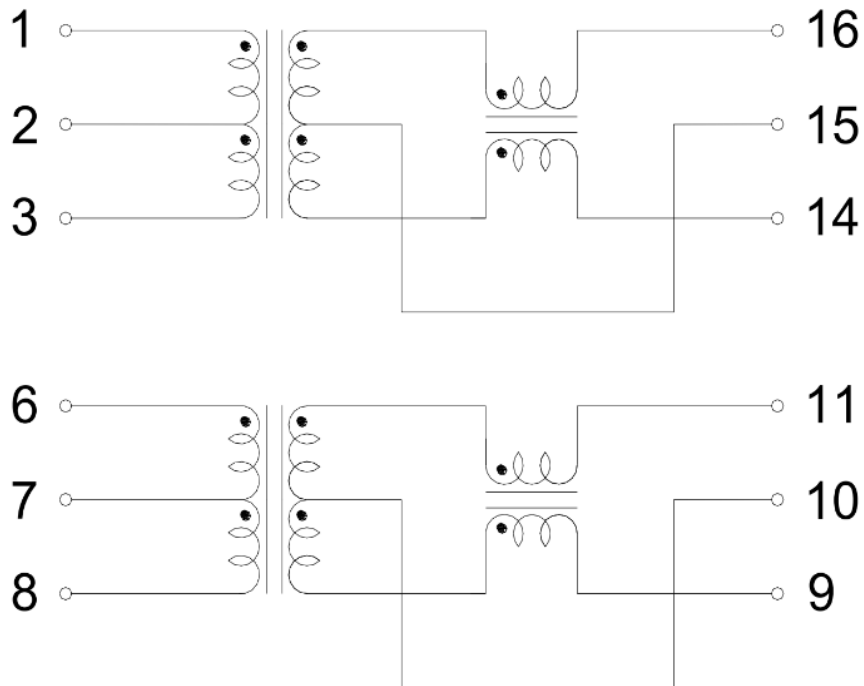


Suggested pad layout

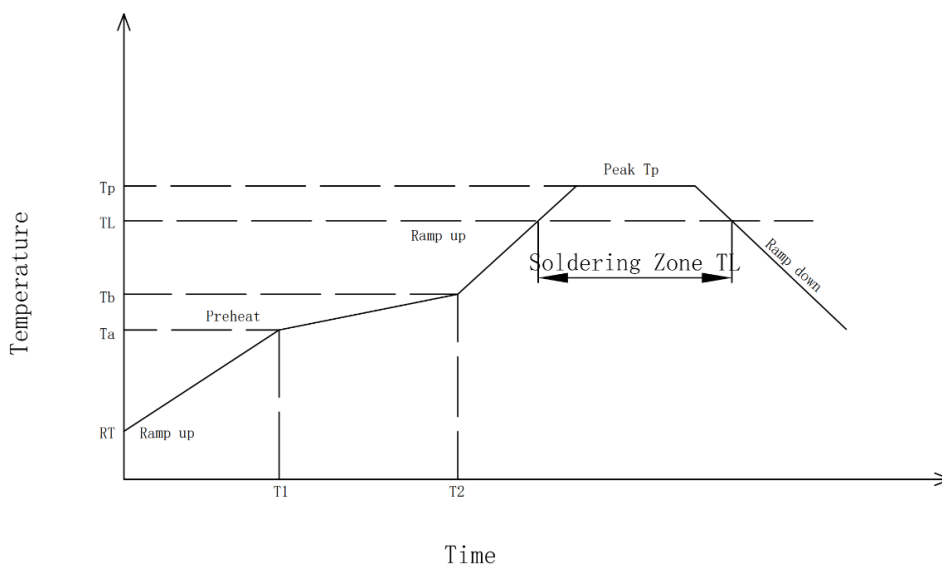
Dimensions are in millimeters with the following tolerances: X.XX = ±0.10

## 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

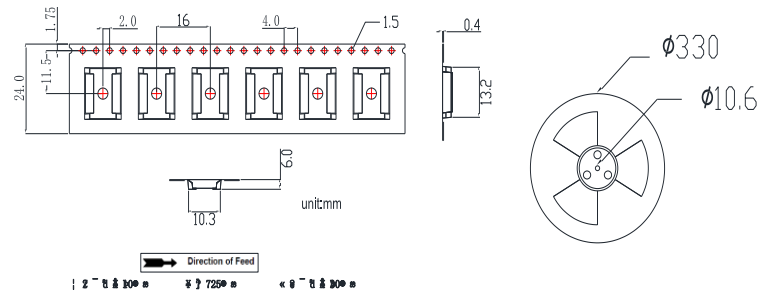
1 reel = 725 pcs

A (Carrier Tape Width):  $24 \pm 0.3$  mm

B (Sprocket hole to Cavity center):  $11.5 \pm 0.2$  mm

C (Cavity width):  $10.3 \pm 0.2$  mm

Weight: 900gr



1 Carton = 9 reels = 6525 pcs

Carton dimensions: 373\*365\*284 mm

Carton Weight: 9.4 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-23-8-033 – TMU16A02W**

**Revision: C**

|         |  |
|---------|--|
| Date:   | 2024-07-03                                   |
| Notes:  | Sub-level category change to LAN Transformer |
| Author: | Javier Vasena                                |

**Previous Revisions**

**Revision: A (Original First Release)**

|         |               |
|---------|---------------|
| Date:   | 2023-02-21    |
| Notes:  |               |
| Author: | Javier Vasena |

**Revision: B**

|         |  |
|---------|--|
| Date:   | 2023-03-30                             |
| Notes:  | Update in PN for Q1 2023 availability. |
| Author: | Javier Vasena                          |





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