



# TAOGLAS®



# Datasheet

## LAN Transformer 10G Base-T PoE++

**Part No:**  
TMUG24C02Q

### **Description:**

10G Base-T transformer  
Single Port and 24pin SMT

### **Features:**

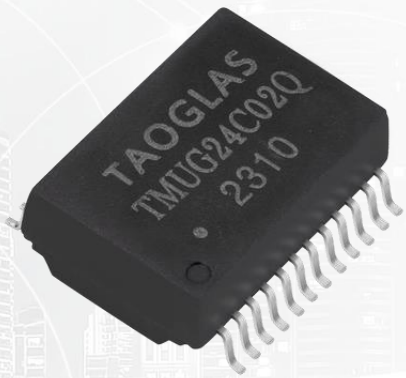
PoE++  
Transformer + CMC  
Industrial grade

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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 TMUG24C02Q is a 10G Base-T Single Port of 24pin with Transformer and Common Mode Choke which makes it suitable for PoE+ (720mA) 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	120uH Min. @100KHz/0.1V with 10.8mA DC Bias
Turns Ratio (±3%)	TX=1CT: 1CT      RX=1CT: 1CT
Insertion Loss	-1.5dB Max@1-250MHz
	-3.0dB Max@250-500MHz
Return Loss	-16dB Min@1-40MHz
	-16+10log(f/40) dB Min@40-500MHz
Crosstalk	-35dB Min@1-100MHz
	-30dB Min@100-500MHz
CMRR	-30dB Min@1-250MHz
	-20dB Min@250-500MHz
DC Current Rating	720mA DC Max @57V
Hi-Pot	1500Vrms Min

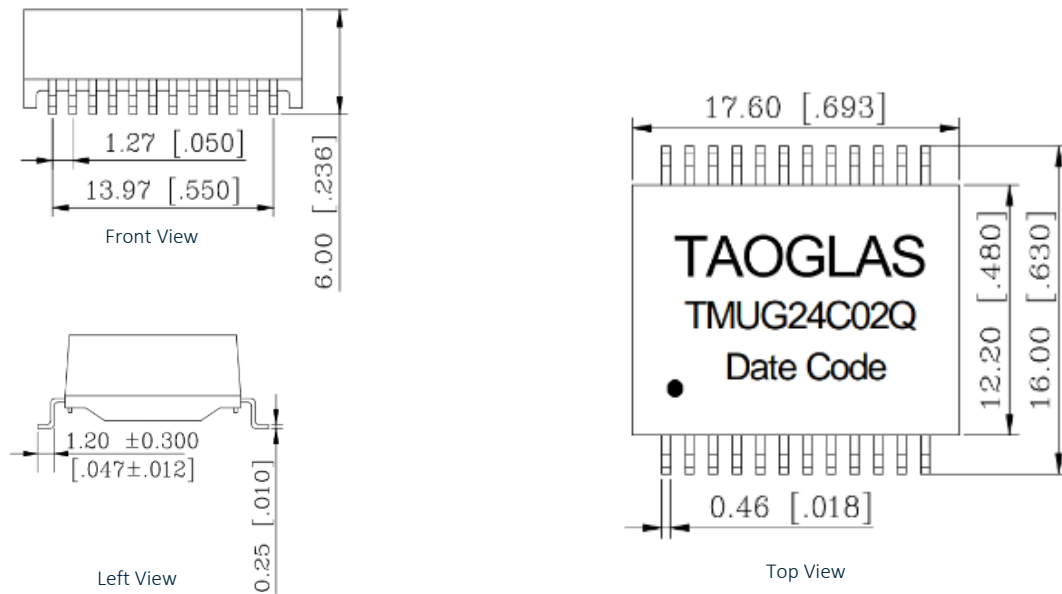
Environmental Specifications	
Operating Temperature	-40°C TO +85°C

Compliance	
UL recognized - FILE NO. E528697	
RoHS Compliant	

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

## 3. Mechanical

### 3.1 Mechanical Drawings

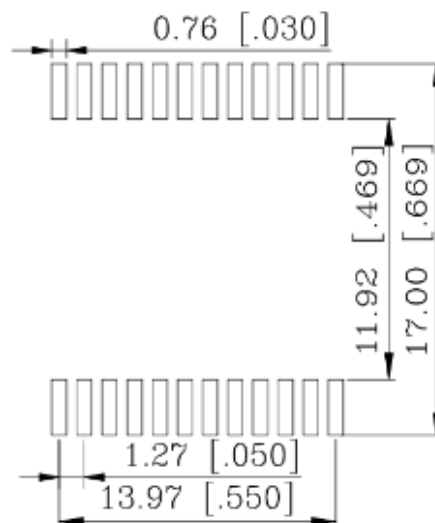


#### Mechanical Specifications

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

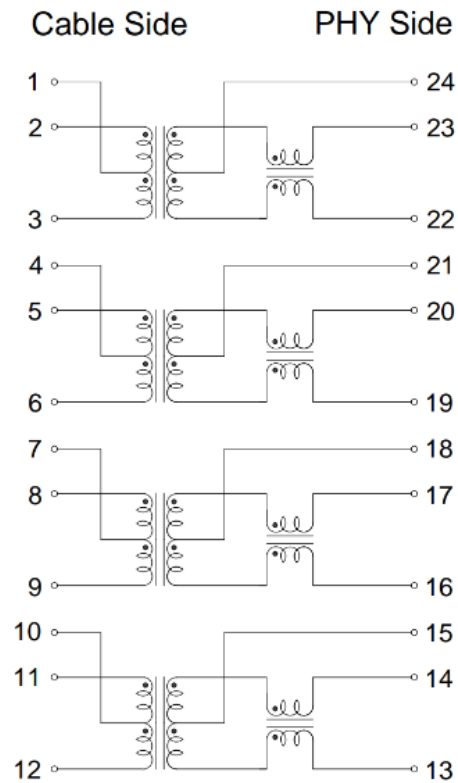


Suggested pad layout

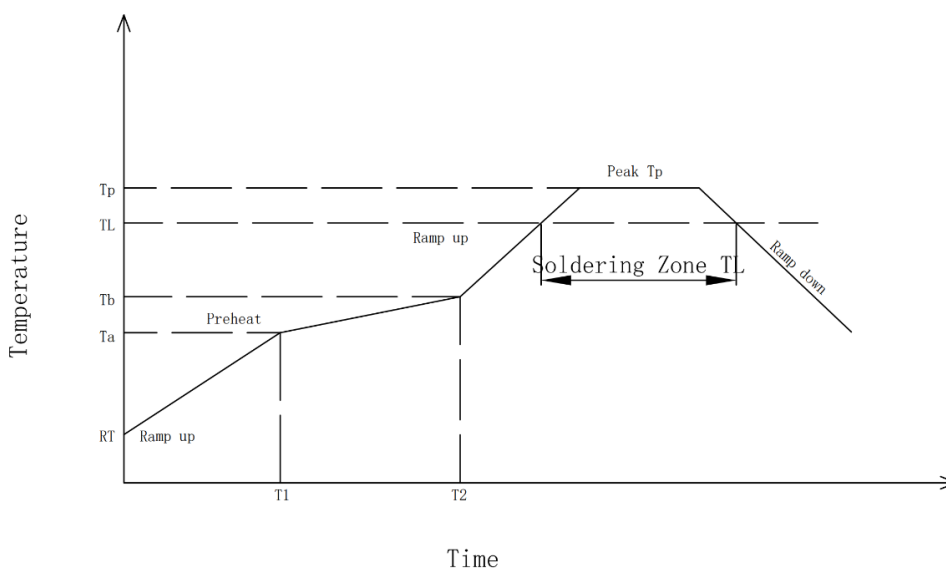
Dimensions are in millimeters with the following tolerances: X.XX = ±0.10

## 4. Electrical

### 4.1 Electrical Drawings



### 4.2 Profile of Reflow Solder



Preheat :  
 Temperature ( $T_a$ - $T_b$ ):150-200°C  
 Time( $T_1$ - $T_2$ ):60-180s

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

Max Temperature ( $T_p$ ):250(+0/-5°C)  
 Max Time ( $T_p$ ):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

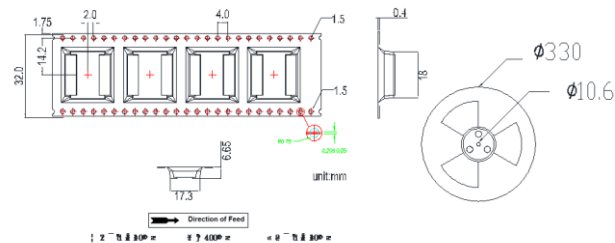
## 5. Packaging

### 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: 8.05 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-23-8-052 – TMUG24C02Q**

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

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

**Previous Revisions**






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