



# TAOGLAS®



# Datasheet

## LAN Transformer 10/100 Base-T

**Part No:**  
TM1188NL

### **Description:**

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

### **Features:**

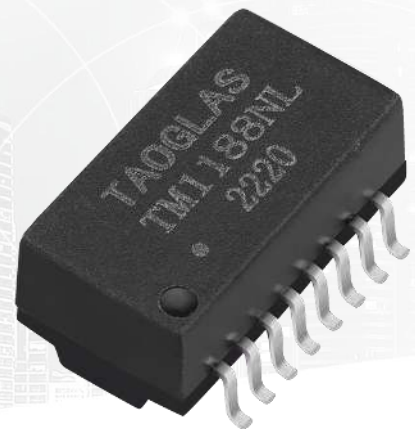
CMC/Cable  
AutoMDIX  
Industrial grade  
RoHS & REACH Compliant

|       |                     |   |
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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 TM1188NL is a 10/100Base-T Single Port of 16pin with Common Mode Choke on the cable side which makes it suitable of AutoMDIX feature.

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               | 350µH MIN @ 100KHz 0.1V 8mA DC Bias          |
| Turns Ratio (±2%)            | TX=1CT: 1CT                      RX=1CT: 1CT |
| DCR                          | 1.2 Ω MAX                                    |
| Insertion Loss               | -1.1dB MAX @ 1-100Mhz                        |
| Return Loss                  | -20dB MIN @ 1-30Mhz                          |
|                              | -14dB MIN @ 30-60Mhz                         |
|                              | -11.5dB MIN @ 60-80Mhz                       |
| Cross talk                   | -45dB MIN @ 1-30Mhz                          |
|                              | -40dB MIN @ 30-60Mhz                         |
|                              | -35dB MIN @ 60-100Mhz                        |
| DCMR (dB TYP)                | -42dB MIN @ 1-30Mhz                          |
|                              | -37dB MIN @ 30-50Mhz                         |
|                              | -33dB MIN @ 50-100Mhz                        |
| Hi-Pot                       | 1500Vrms Min                                 |

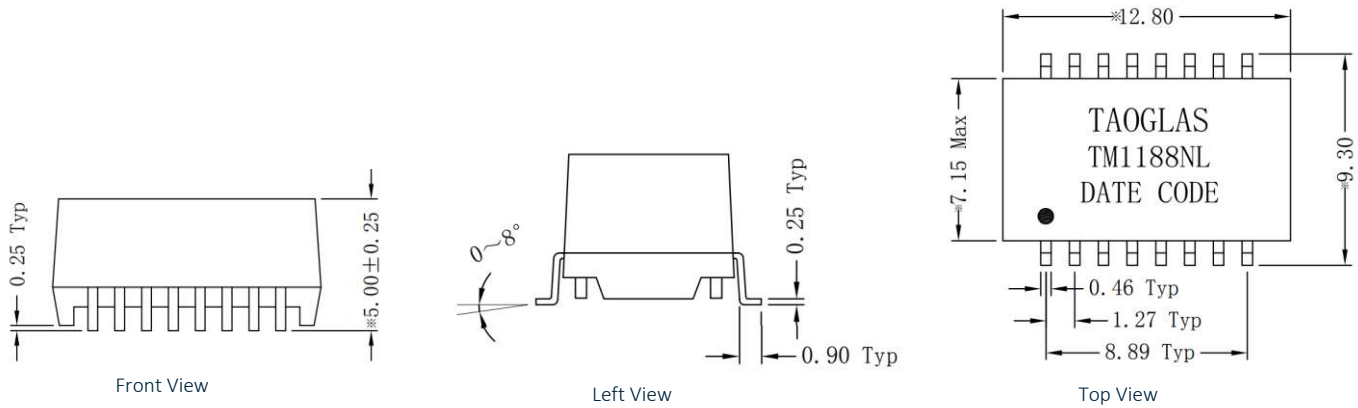
| Environmental Specifications |                |
|------------------------------|----------------|
| Operating Temperature        | -40°C TO +85°C |

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

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

### 3. Mechanical

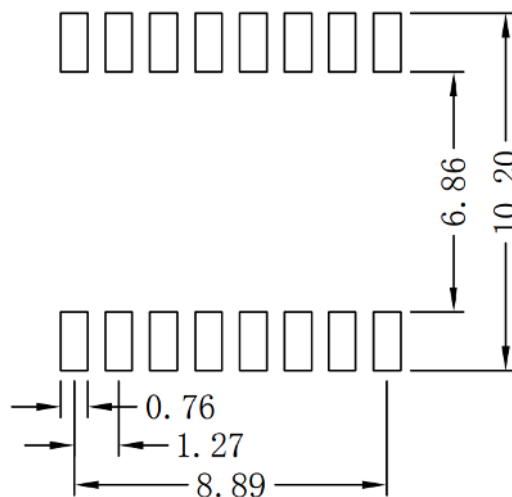
#### 3.1 Mechanical Drawings



| Mechanical Specifications |                     |
|---------------------------|---------------------|
| Length                    | 12.8 mm             |
| Width                     | 9.3 mm              |
| Height                    | 5.1 mm              |
| Mounting Style            | Surface Mount (SMT) |

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

#### 3.2 Pad Layout

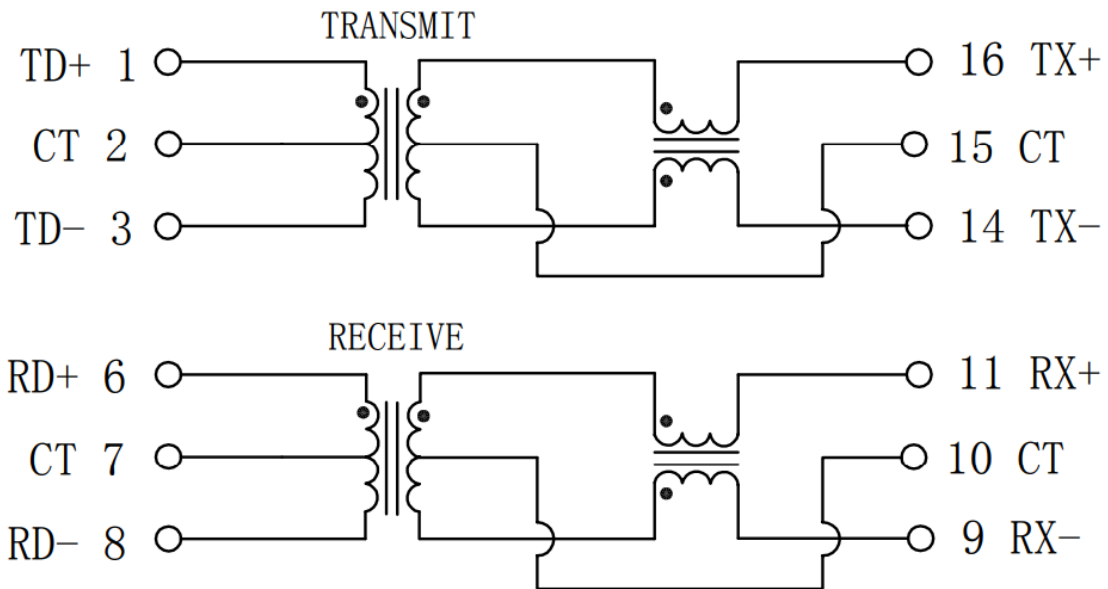


Suggested Pad Layout

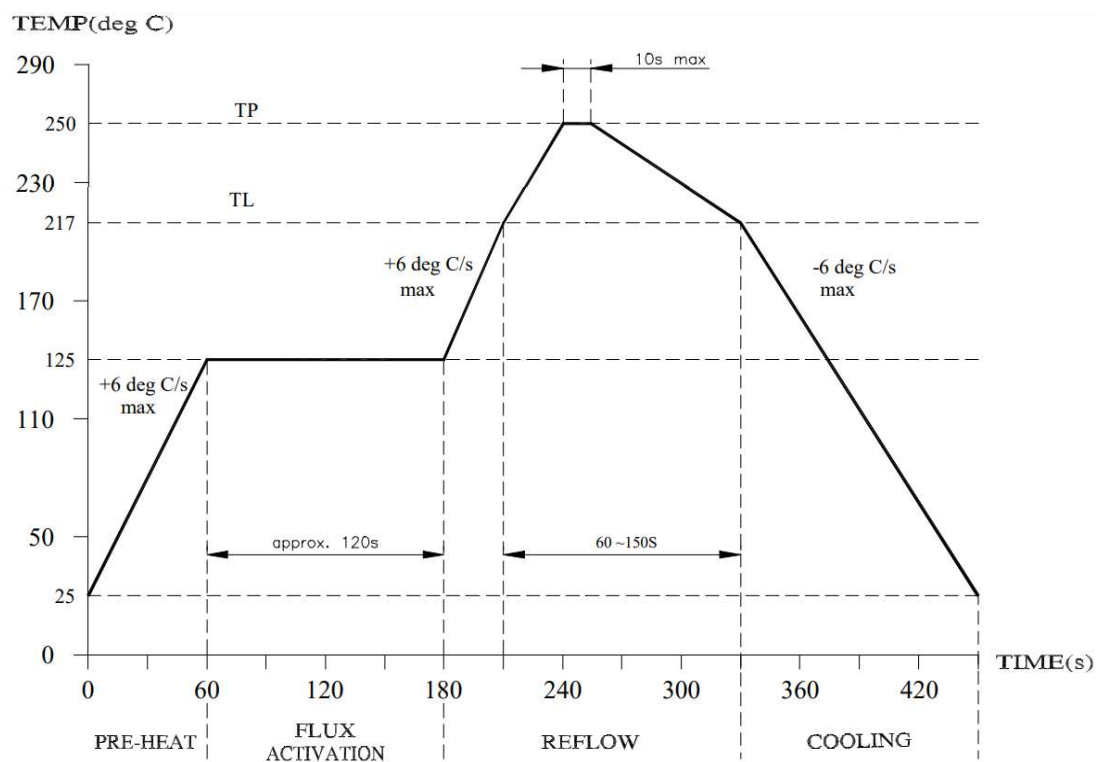
Dimensions are in millimeters with the following tolerances: X.XX = ±0.10

## 4. Electrical

### 4.1 Electrical Drawings



### 4.2 Profile of Reflow Solder



## 5. Packaging and Storage

### 5.1 SPQ

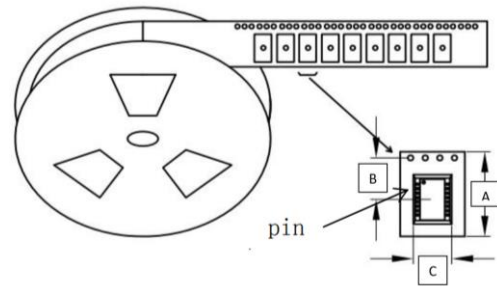
750 pcs/reel

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

B (Sprocket hole to Cavity center):  $11.6 \pm 0.2$  mm

C (Cavity width):  $10.6 \pm 0.2$  mm

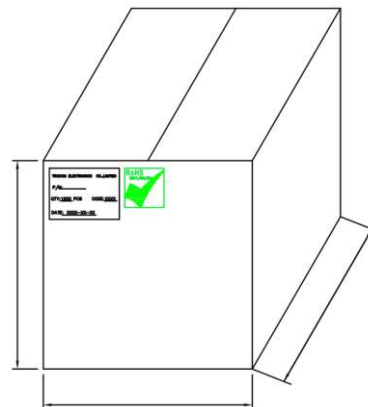
Reel weight: 800 g



1CTN = 6 reels = 4500 pcs

Carton dimensions: 370\*370\*250mm

Carton Weight: 6.5 kg



# Changelog

Changelog for the datasheet

**SPE-22-8-074 – TM1188NL**

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

|         |               |
|---------|---------------|
| Date:   | 2022-11-08    |
| Notes:  |               |
| Author: | Javier Vasena |

**Previous Revisions**

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