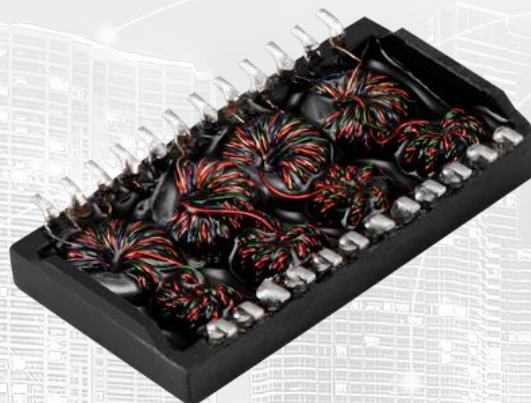




TAOGLAS®



Datasheet

LAN Transformer 1G Base-T PCMCIA

Part No:
TMY5MBNL

Description:

1G Base-T LAN Transformer
Single Port and 24pin SMT with low-profile PCMCIA

Features

3 Wire + Transformer
PCMCIA
AEC-Q200
Automotive 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 TMY5MBNL is a 1G Base-T Single Port of 24pin with 3 Wire and Transformer designed for PCMCIA 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(100KHz/0.1V@8mA)	350μH Min
Inductance(100KHz/0.1V@8mA)	300μH MIN (-40°C TO +85°C)
Turns Ratio (±5%)	1CT: 1CT
Insertion Loss (dB MAX)	-1.0dB (1-100MHz)
	-1.9dB (125MHz)
Return Loss (dB MIN)	-16dB (1-40MHz)
	-10dB (40-100MHz)
Crosstalk (dB Min)	-50dB (1MHz)
	-33dB (10-100MHz)
CMR (dB MIN)	-42dB (2MHz)
	-15dB (30-200MHz)
DCR	1.3Ω MAX
Hi-Pot	1500Vrms/0.5mA/60Sec

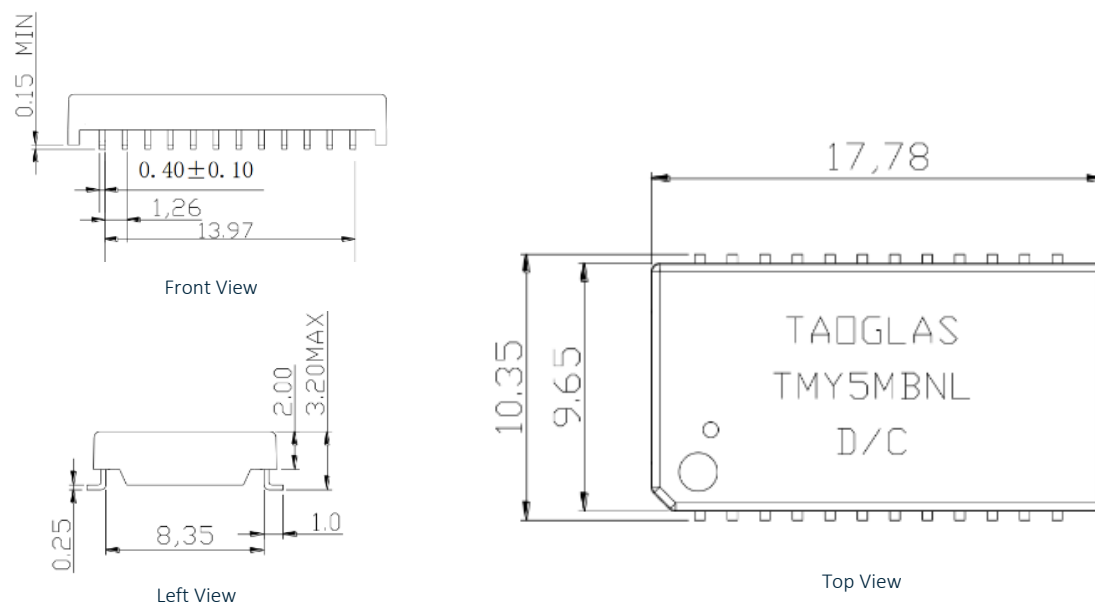
Environmental Specifications	
Operating Temperature	-40°C TO +125°C
Max. reflow temperature	240°C Max

Compliance	
RoHS Compliant	

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

3. Mechanical

3.1 Mechanical Drawings

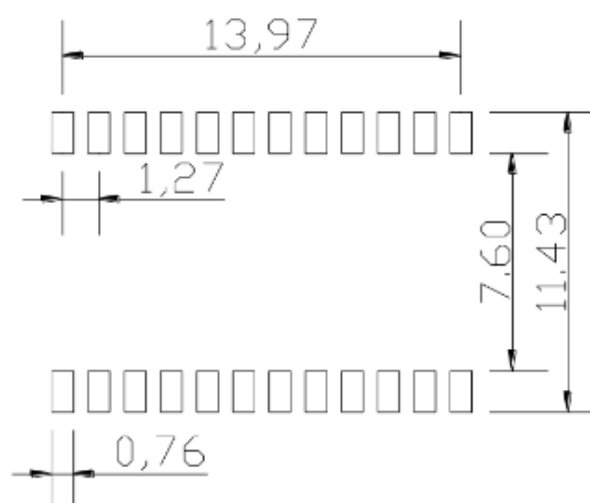


Mechanical Specifications

Length	17.78 mm
Width	10.35 mm
Height	3.2 mm
Weight	1.23 g
Mounting Style	Surface Mount (SMT)

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

3.2 Pad Layout

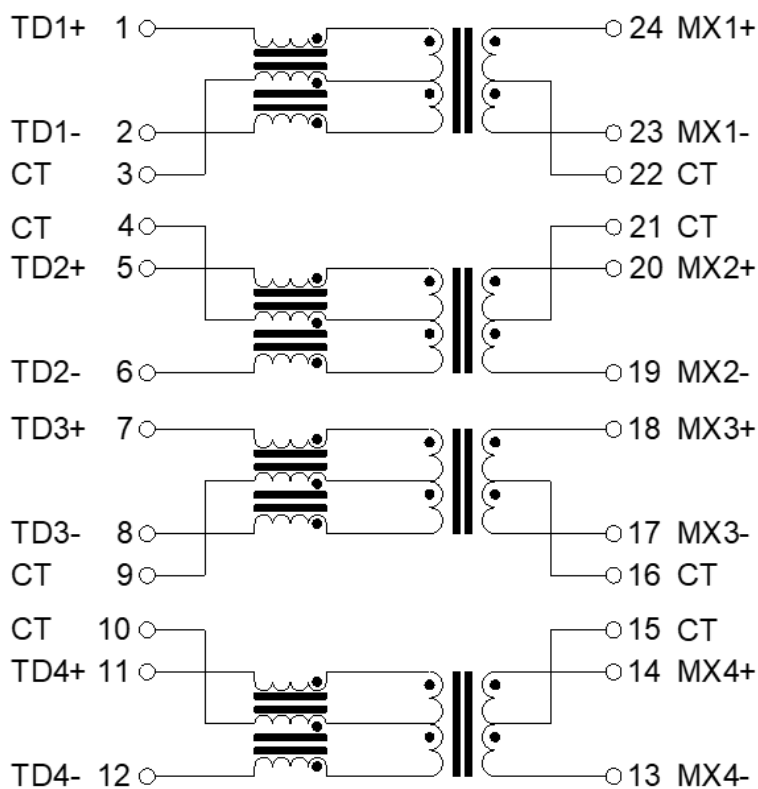


Suggested pad layout

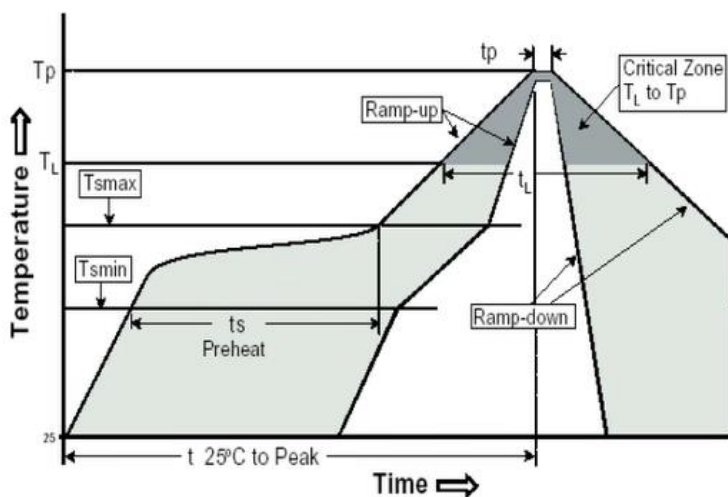
Dimensions are in millimeters with the following tolerances: X.XX = ±0.10

4. Electrical

4.1 Electrical Drawings



4.2 Profile of Reflow Solder

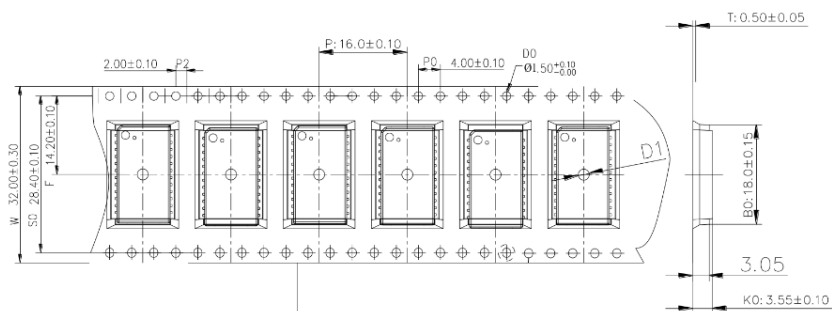


Profile Feature	Pb-Free Assembly
Average Ramp-Up Rate (T_{smax} to T_p)	3°C /second max.
Preheat	
-Temperature Min (T_{smin})	150°C
-Temperature Max (T_{smax})	200°C
-Time (t_{smin} to t_{smax})	60-120 seconds
Time maintained above:	
-Temperature (T_L)	217°C
-Time (t_L)	60-150 seconds
Peak/Classification Temperature (T_p)	245±5°C
Time within 5°C of actual Peak Temperature (t_p)	20-40 seconds
Ramp-Down Rate	6°C/seconds max
Time 25°C to Peak Temperature	6 minutes max.

5. Packaging

5.1 SPQ

1 reel = 1100 pcs
Weight = 1.875 kgs



5.2 Carton

1 Carton = 8 reels = 8800 pcs
Carton dimensions: 365*365*350 mm
Carton Weight: 15 kg



5.3 Label



Changelog

Changelog for the datasheet

SPE-24-8-119 – TMY5MBNL

Revision: A (Original First Release)	
Date:	2024-06-30
Notes:	
Author:	Javier Vasena

Previous Revisions



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