



# TAOGLAS®



# Datasheet

## RJ45 ICM 2.5G Long Body PoE++

**Part No:**  
TMJM6002A9NL

### Description:

RJ45 connector with integrated magnetics 2.5G Base-T.  
Single Port Tab-UP with right angle THT mount and LEDs.

### Features:

- Long Body
- 3 Wire + Transformer
- Shielded EMI Finger
- Board guide
- PoE++ (720mA)
- Industrial grade

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## 1. Introduction



Featuring a popular footprint and compatible package to industry RJ45 Integrated Connectors standards, the Taoglas TMJM6002A9NL is an RJ45 Integrated Connector 2.5G Base-T Single Port Tab-UP with shielded EMI Finger and Long Body design that offers space for PoE++ (720mA) capabilities.

Typical Applications Include:

- Industrial Automation
- Hubs
- Routers
- Switches
- Wireless Access Points

Taoglas Magnetics offer an extensive product line of RJ45 Integrated Connectors designed for commercial and industrial grade applications, supporting 10/100 Base-T (Atmos100 Series) and 1G Base-T (Atmos1000 series). These surface mount or through-hole components provide reliable performance and maintain signal integrity that meets IEEE 802.3 standards, and they are UL certified. The Power over Ethernet options are also available including PoE, PoE+ and PoE++.

The majority of Taoglas RJ45 ICMs are manufactured with fully automated winding, assembly & testing to ensure consistent performance, quality and reliability while ensuring cost competitiveness for its customers. These products are fully compliant with the REACH and RoHS directive, and compatible with all major PHY vendors.

For customized products or support with integration, contact your regional Taoglas customer support team for further information.

## 2. Specifications

Electrical Performance @25°C		
Inductance OCL	150uH MIN @ 100KHz,0.1Vrms,15mA DC Bias	
Turns Ratio (±5%)	TX=1CT: 1CT	RX=1CT: 1CT
Insertion Loss	1-50MHz @ -0.5dB Max	
	50-125MHz @ -1.0dB Max	
PHY-SIDE Return Loss (dB Min, @100 Ohms ±1%)	1~40MHz: -20	
	40~250MHz: -20+15*LOG10(f/40)	
LINE-SIDE Return Loss (dB Min, @100 Ohms ±1%)	1~40MHz: -20	
	40~250MHz: -20+15*LOG10(f/40)	
Cross Talk	-30dB MIN @1-125MHz	
Common Mode Rejection Ratio	-30dB MIN @30-200MHz	
Common Mode to Differential Mode Rejection	10-125MHz @ -45+f/35 dB Min	
Balanced DC Line Current	720mA Max @57VDC Continuous	
	1.2A Max @57VDC For 200 Milliseconds	
Isolation Hi-Pot	1500Vrms	

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

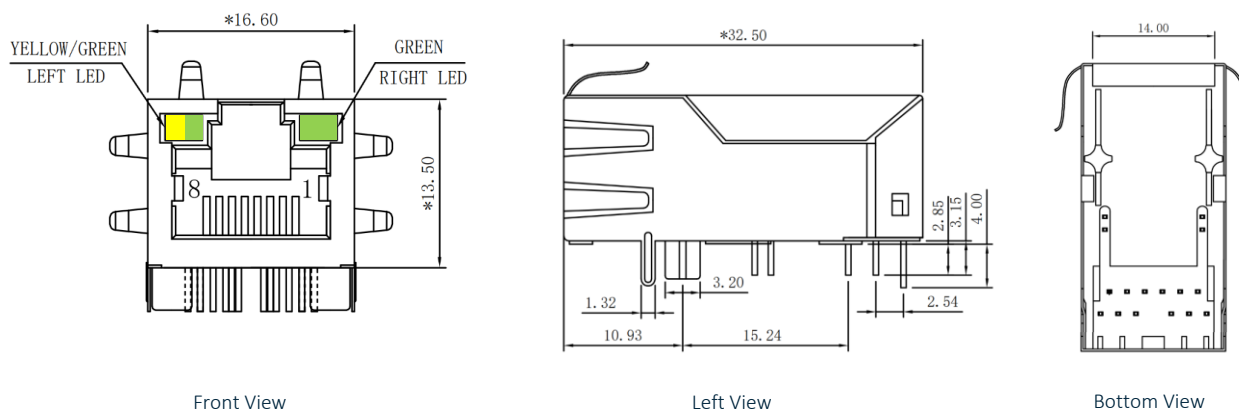
Material Specifications	
Housing	Thermoplastic PBT+30%G. F UL94V-0
Contact	Phosphor Bronze C5210R-EH Thickness = 0.35mm
Pins	Brass C2680R-H Thickness = 0.35mm
Shield	Stainless Steel SUS 201-1/2H Thickness = 0.2mm
Contact Plating	Gold in contact area. Thickness = 6μ" min.

Compliance	
UL recognized - FILE NO. E528697	
RoHS Compliant	

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

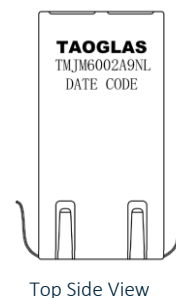
## 3. Mechanical

### 3.1 Mechanical Drawings

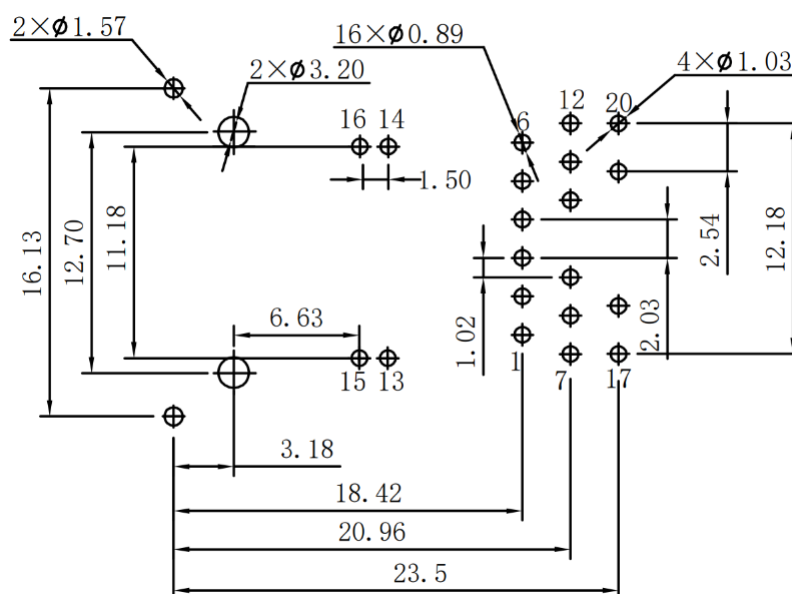


Mechanical Specifications	
Height Above Board	13.5 mm
Width	16.6 mm
Depth	32.5 mm
Mounting Style	Through Hole (THT)
Mounting Angle	Right Angle

Dimensions are in millimeters with the following tolerances: X.XX =  $\pm 0.25$



### 3.2 PCB Layout

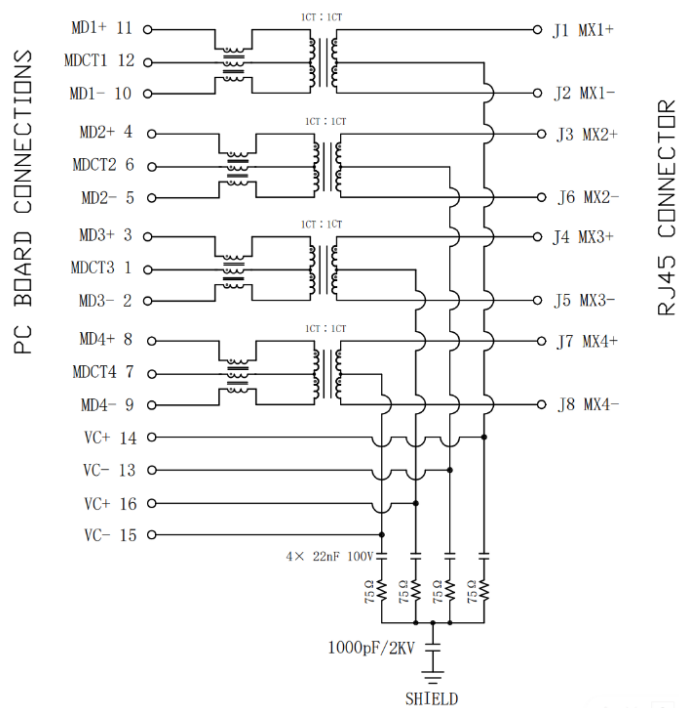


Suggested PCB Layout (Top View)

Dimensions are in millimeters with the following tolerances: X.XX =  $\pm 0.10$

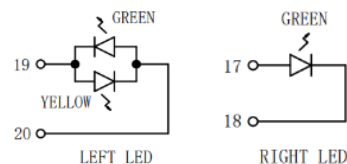
## 4. Electrical

### 4.1 Electrical Drawings

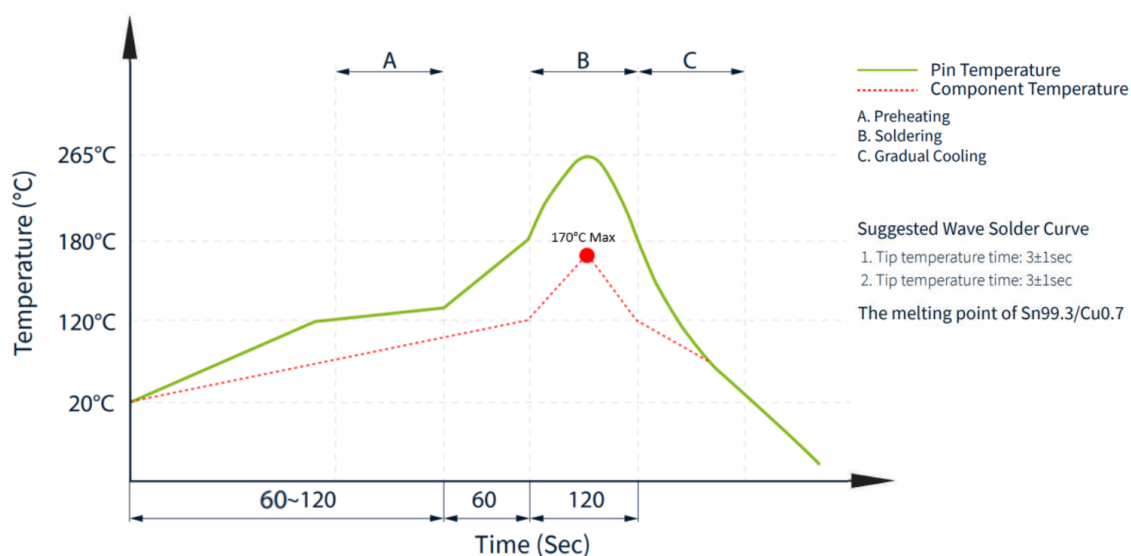


#### LED Electrical Specification

Standard LED	Wavelength (nm)	$V_F$ ( $I_F=20\text{mA}$ )	$I_R$ ( $V_R=5\text{V}$ )
Green	565	1.8~2.6v	10 $\mu\text{A}$ Max
Yellow	585	1.8~2.6v	10 $\mu\text{A}$ Max



### 4.2 Profile of Wave Solder



## 5. Packaging

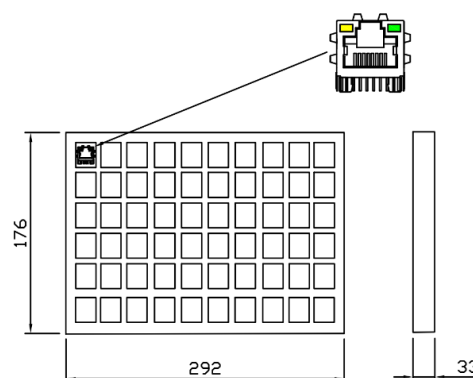
### 5.1 SPQ

60 pcs/tray

Tray dimension: 292\*176\*33 mm

Weight: 640gr

Packaging material: PVC



1 Carton = 16 trays = 960 pcs

Carton dimensions: 370\*300\*300mm

Carton Weight: 10.5kg



### 5.2 Label

Taoglas Limited	
P/N NO: XXXXXXXX	
PO: XXXXXXXX	B/N: XXXXXXXX
QYT: XXX PCS	DC: XXXX
DATE: XXXX-XX-XX	

**Carton Label (8x4cm)**

# Changelog

Changelog for the datasheet

**SPE-23-8-049 – TMJM6002A9NL**

## Revision: B

Date:	2023-07-05
Notes:	Update in Solder Profile
Author:	Javier Vasena

## Previous Revisions

### Revision: A (Original First Release)

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





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