



TAOGLAS®



Datasheet

RJ45 ICM 10/100 Base-T Short Body PoE

Part No:
TMJ4049HDNL

Description:

RJ45 connector with integrated magnetics 10/100 Base-T
Single Port Tab-DOWN with right angle THT mount and LEDs

Features:

Industrial grade
Transformer + CMC + AutoXfmr + Diode
PoE (350mA)
Short Body
RoHS Compliant

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1. Introduction



Featuring a popular footprint and compatible package to industry RJ45 Integrated Connectors standards, the Taoglas TMJ4049HDNL is an RJ45 Integrated Connector 10/100 Base-T Single Port Tab Down, its shielded short body design offers extra space and supports PoE applications in Industrial environments.

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		
OCL (@100KHz,100mV,8mA DC Bias)	PINS:(5-6), (1-2) =350uH MIN	
Turn Ratio (100KHz,0.1V)	PINS:(5-6) :(J1-J2) =1CT:1 ±2%	PINS:(1-2) :(J3-J6) =1CT:1 ±2%
Insertion Loss	-1.0dB MAX @ 1~100MHz	
Return Loss	-18dB MIN @ 1~10MHz	
	-16dB MIN @ 10~30MHz	
	-12dB MIN @ 30~60MHz	
	-10dB MIN @ 60~100MHz	
	-40dB MIN @ 1~30MHz	
	-35dB MIN @ 30~60MHz	
	-30dB MIN @ 60~100MHz	
Common Mode Rejection	-30dB MIN @ 1~50MHz	
	-20dB MIN @ 50~150MHz	
PoE	Power on used or unused pairs for up to 350mADC	
Hipot Test	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
Contact Plating	Gold 6 micro-inches min. In contact area
Pins	Brass C2680R-H Thickness = 0.35mm
Shield	Stainless Steel SUS 201-1-1/2H Thickness = 0.2mm
Wave solder tip temperature	265°C Max,5 Sec

Compliance	
RoHS Compliant	
IEEE 802.3af	

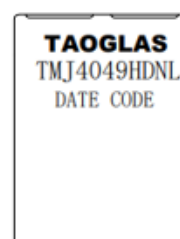
Storage requirements	
Humidity	MSL - 1
Storage Temperature	-40°C TO +85°C

Fig. 1

Technical drawing of the front view of a mechanical part. The drawing shows a rectangular base with a central slot and a smaller rectangular feature on the right side. Dimensions are indicated: overall width is 21.25, overall height is 4.00, and the central slot width is 10.80. Other dimensions include 3.60, 0.85, 1.24, and 3.15.

Technical drawing of a mechanical part, likely a bracket or support. The drawing shows a side view and a top view. The side view indicates a width of 14.00 and a height of 3.80. The top view shows a rectangular base with two vertical supports and a central horizontal slot.

Mechanical Specifications	
Height Above Board	13.3mm
Width	15.93mm
Depth	21.25mm
Mounting Style	Through Hole (THT)
Mounting Angle	Right Angle



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

Technical drawing of a rectangular plate with dimensions and hole specifications. The plate has overall dimensions of 15.75 (width) by 8.89 (height). The drawing shows a central vertical slot and several holes. The holes are specified as follows:

- Top row: 9 holes, 1.27 X 9 = 11.43 (total width), 2.54 (center-to-center distance), 1.27 (hole diameter), 0.635 (hole offset).
- Second row: 10 holes, 1.27 (center-to-center distance), 3.05 (hole offset), 4.06 (hole offset).
- Third row: 4 holes, 8.18 (center-to-center distance), 11.43 (total width), 13.26 (total width), 15.75 (total width).
- Bottom row: 4 holes, 8.18 (center-to-center distance), 11.43 (total width), 13.26 (total width), 15.75 (total width).

The holes are labeled with their diameters and quantities:

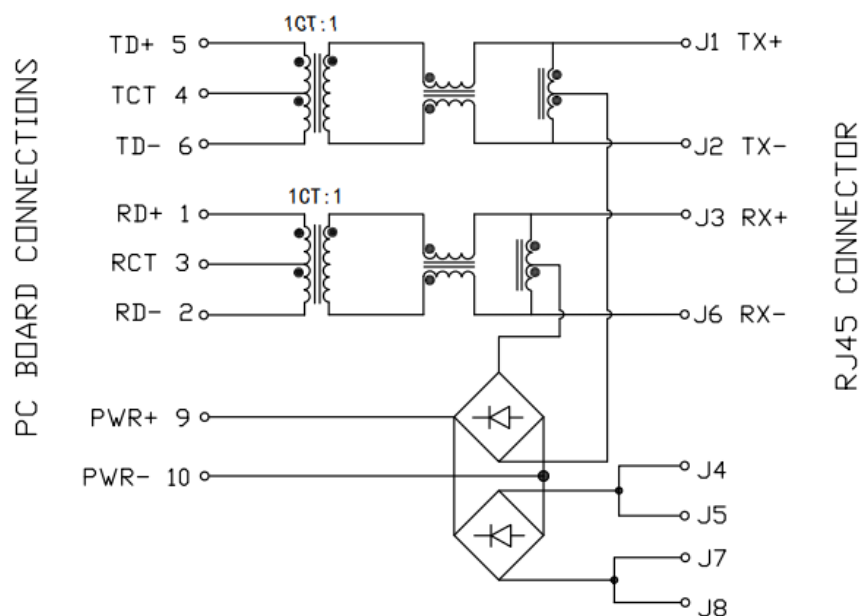
- $\varnothing 0.90 \times 10$
- $\varnothing 1.70 \times 2$
- $\varnothing 3.20 \times 2$
- $\varnothing 1.02 \times 4$

The holes are also labeled with their positions: 1, 2, 9, 10, 11, 12, 13, 14.

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

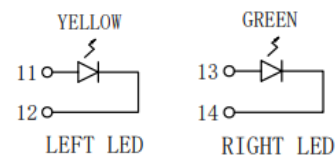
4. Electrical

4.1 Electrical Drawings

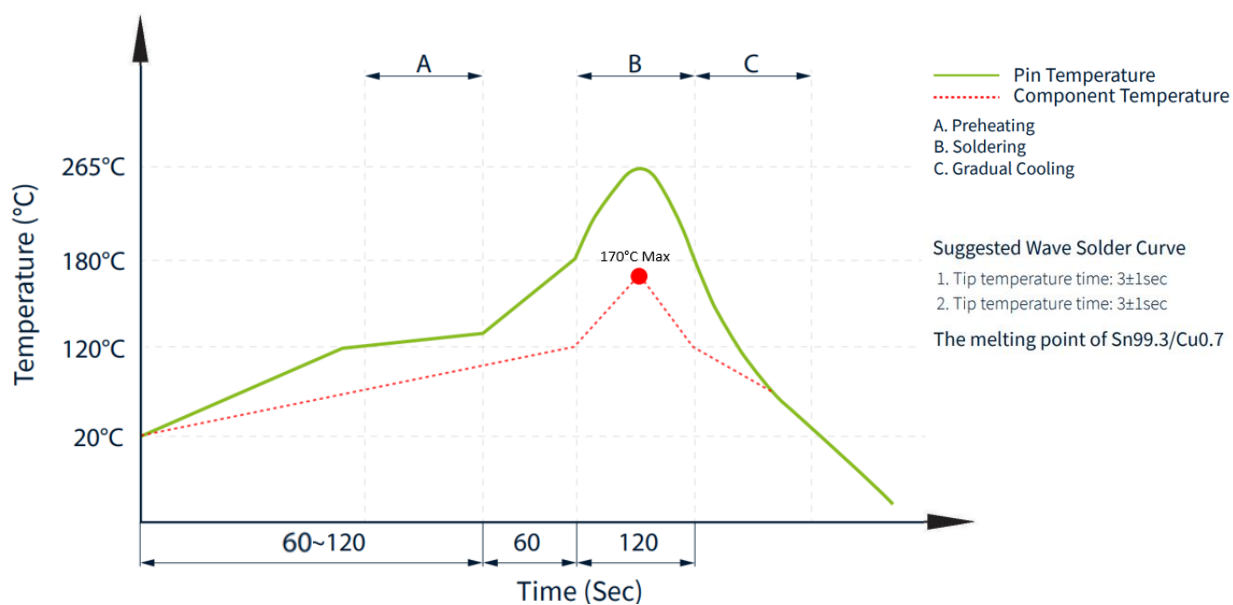


LED Electrical Specification

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 μA Max
Yellow	585	1.8~2.6v	10 μA Max



4.2 Profile of Wave Solder



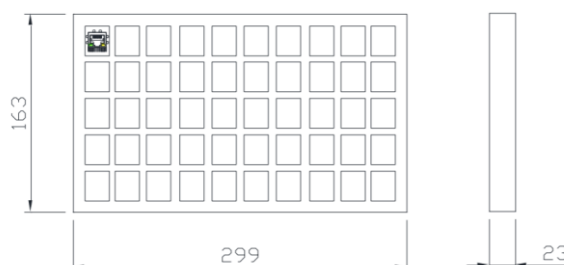
5. Packaging

5.1 SPQ

50 pcs/tray

Tray dimension: 299*163*23 mm

Tray Weight: 360g



1 Carton = 24 trays = 1200 pcs

Carton dimensions: 320*300*310mm

Carton Weight: 9kg



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-23-8-131 – TMJ4049HDNL

Revision: A (Original First Release)	
Date:	2023-07-01
Notes:	
Author:	Javier Vasena

Previous Revisions



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