



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

1.	Introduction	3
2.	Specifications	4
3.	Mechanical	5
4.	Electrical	6
5.	Packaging	7
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	Changelog	8

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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
Cross talk	-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

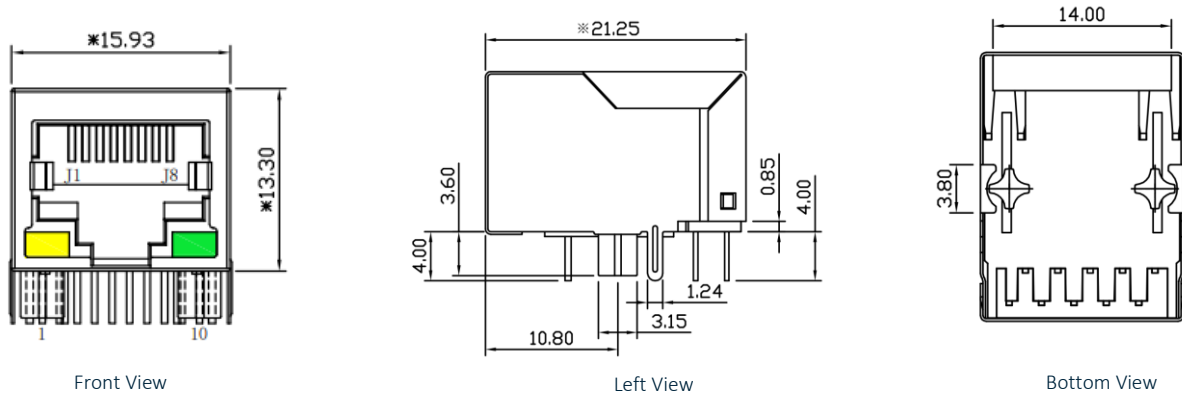
Material Specifications	
Housing	Thermoplastic PBT+30%G. F UL94V-0
Contact	Phosphor Bronze C5210R-EH Thickness = 0.35mm
Contact Plating	Gold 6 micro-inches min. In contact area
Pins	Brass C2680R-H Thickness = 0.35mm
Shield	Stainless Steel SUS 201-1-1/2H Thickness = 0.2mm
Wave solder tip temperature	265°C Max,5 Sec

Compliance	
RoHS Compliant	
IEEE 802.3af	

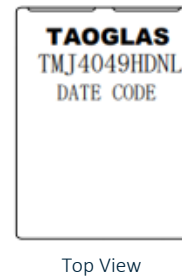
Storage requirements	
Humidity	MSL - 1
Storage Temperature	-40°C TO +85°C

3. Mechanical

3.1 Mechanical Drawings

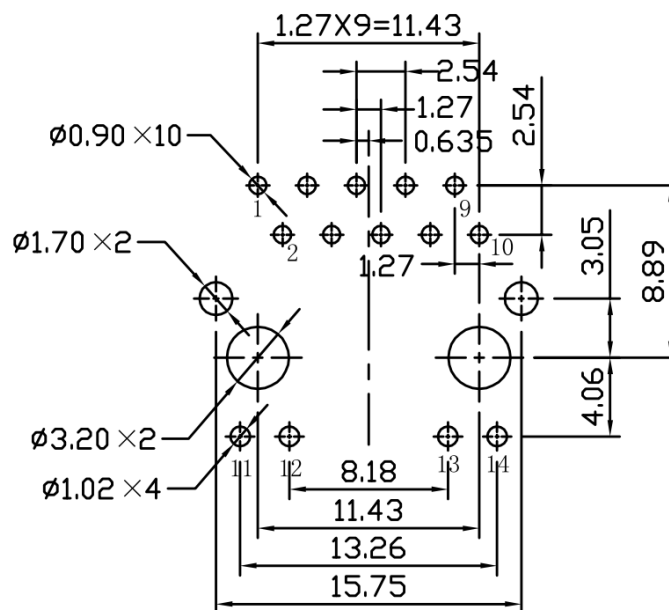


Mechanical Specifications	
Height Above Board	13.3mm
Width	15.93mm
Depth	21.25mm
Mounting Style	Through Hole (THT)
Mounting Angle	Right Angle



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

3.2 PCB Layout

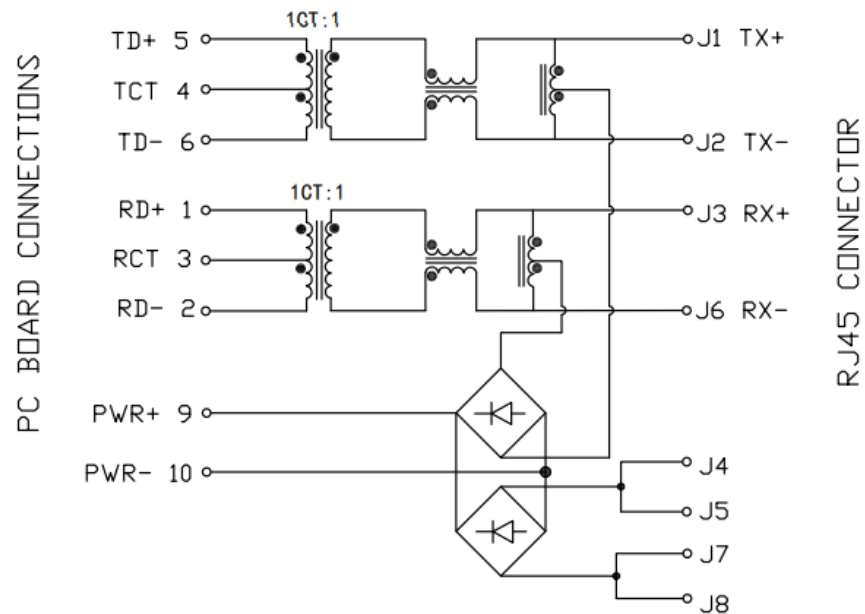


Suggested PCB Layout (Top View)

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

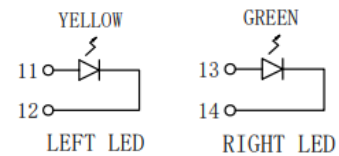
4. Electrical

4.1 Electrical Drawings

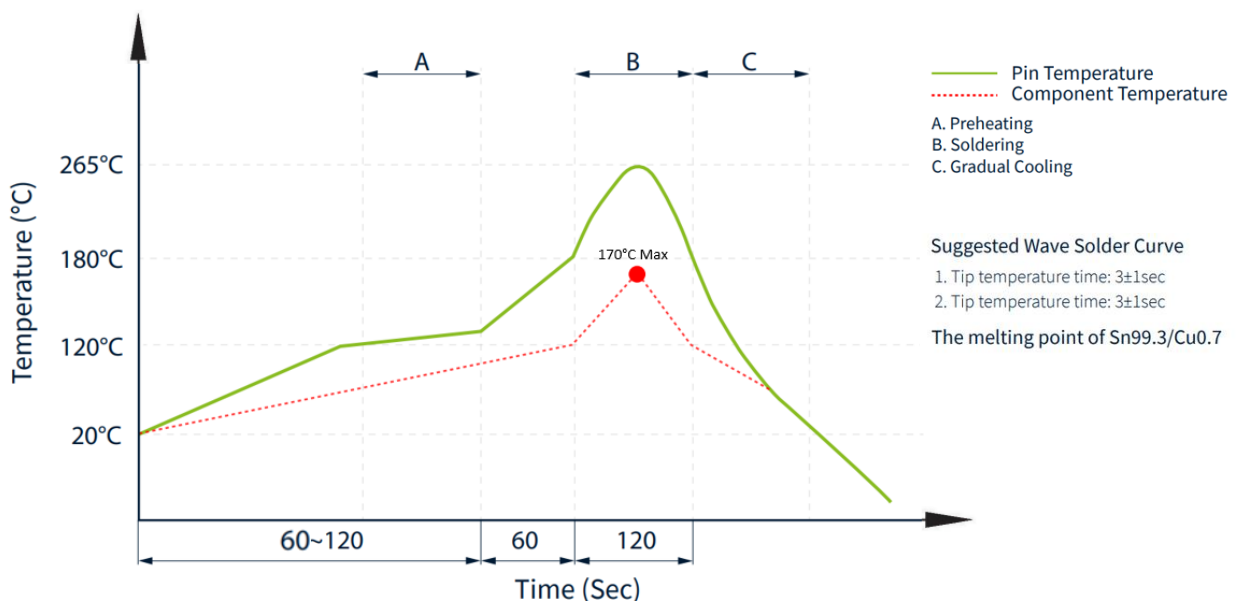


LED Electrical Specification

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



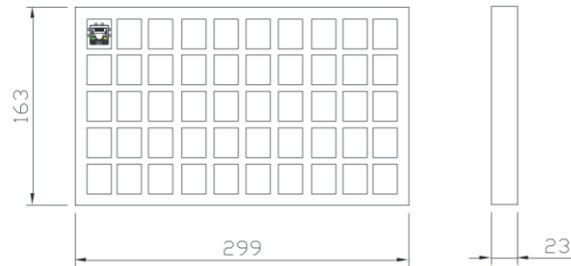
5. Packaging

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



www.taoglas.com

