Datasheet

RJ45 ICM 10/100Base-T Short Body

Part No:
TMJ4011BBNL

Description:

RJ45 connector with integrated magnetics 10/100Base-T

Single Port Tab-DOWN with right angle THT mount and LEDs

Features:

AutoMDIX

Industrial grade

Short Body

RoHS & REACH Compliant

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1. Introduction

Featuring popular footprint and designed to work in industrial environmental conditions, the Taoglas TMJ4011BBNL is an RJ45 Integrated Connector 10/100Base-T Single Port Tab Down with shielded short body designed to offer extra space, and with a schematic that enables AutoMDIX feature.

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	350μH MIN @ 100KHz 0.1V 8mA DC Bias	
Turns Ratio (±2%)	TX=1CT: 1CT	RX=1CT: 1CT
Insertion Loss	-1.0dB MAX @ 1-100Mhz	
Return Loss	-18dB MIN @ 1-30Mhz	
	-15dB MIN @ 30-60Mhz	
	-12dB MIN @ 60-80Mhz	
	-10dB MIN @ 80-100Mhz	
Cross talk	-40dB MIN @ 30Mhz	
	-35dB MIN @ 60Mhz	
	-30dB MIN @ 100Mhz	
Common Mode Rejection	-40dB MIN @ 30Mhz	
	-35dB MIN @ 60Mhz	
	-30dB MIN @ 100Mhz	
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
Contact Plating	Gold Thickness = 6μ" min.
Pins	Brass C2680R-H Thickness = 0.35mm
Shield	Stainless Steel SUS 201-1-1/2H Thickness = 0.2mm

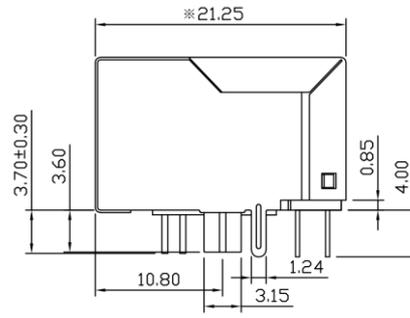| Compliance |
|---|
| UL recognized - FILE NO. E528697 |
| RoHs compliant |

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

3. Mechanical

3.1 Mechanical Drawings
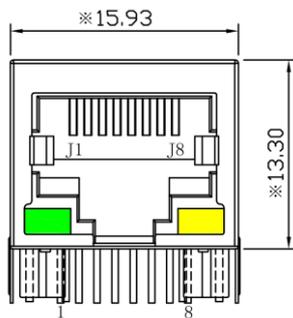
Front View

Left View
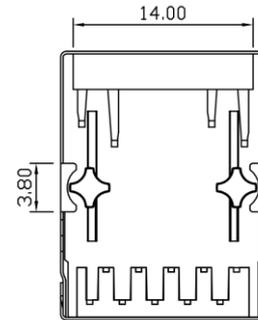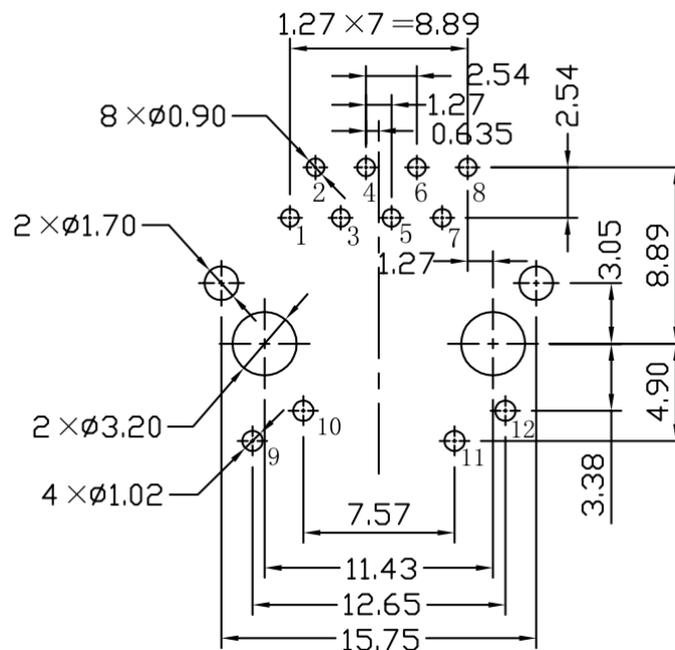

Bottom View

Mechanical Specifications	
Height Above Board	0.52" (13.3mm)
Width	0.627" (15.93mm)
Depth	0.837" (21.25mm)
Mounting Style	Through Hole (THT)
Mounting Angle	Right Angle

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

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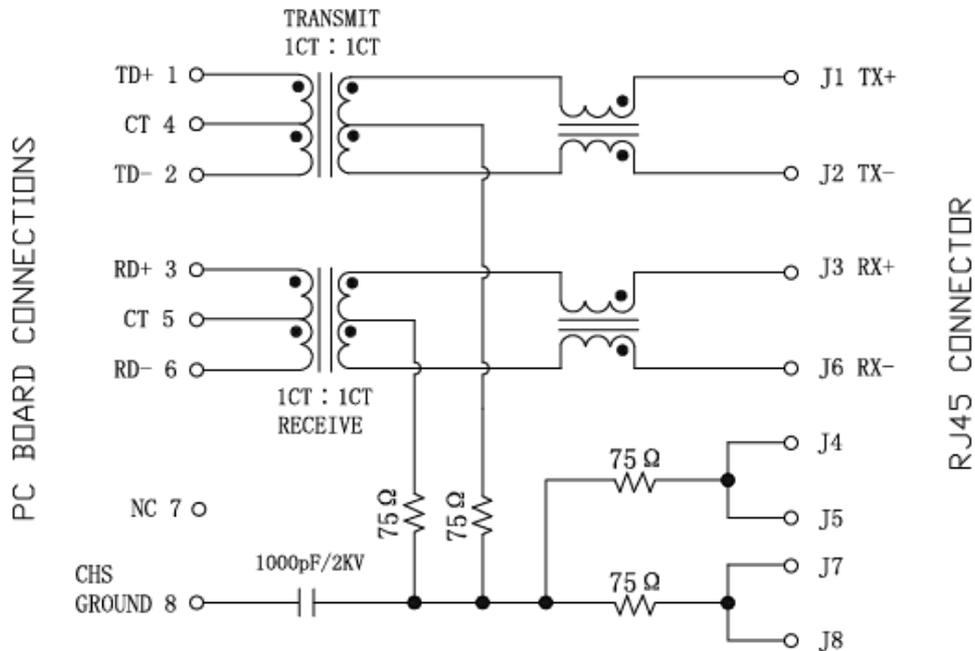Top View

3.2 PCB Layout

Suggested PCB Layout (Top View)

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

4. Electrical

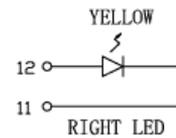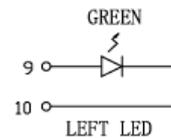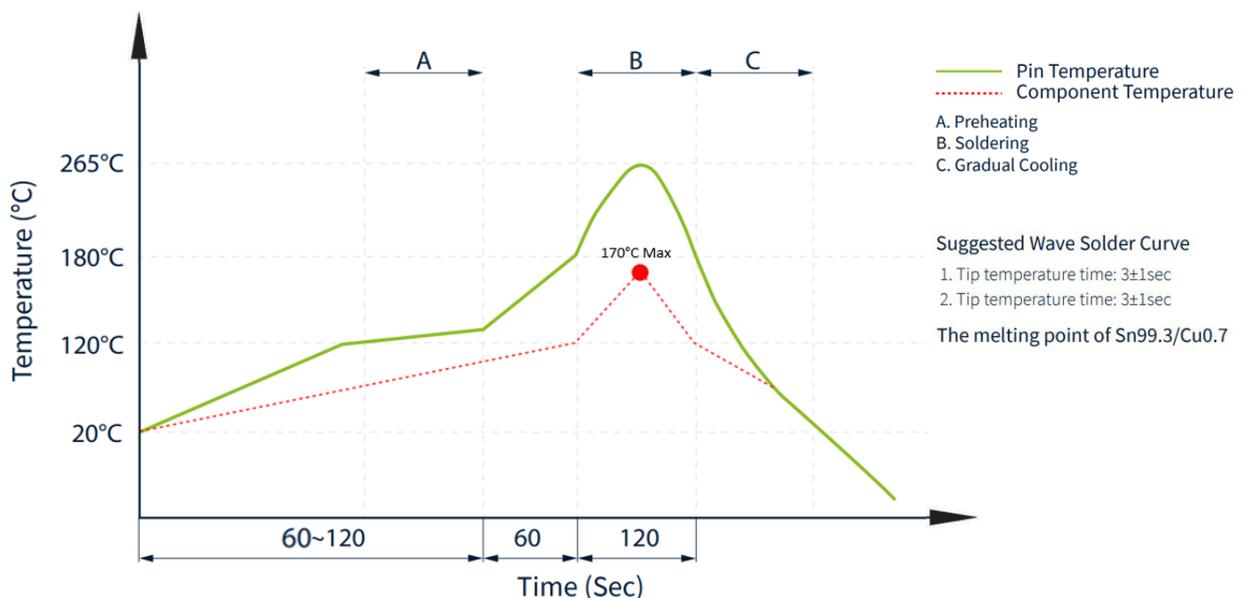## 4.1 Electrical Drawings

LED Electrical Specification			
Standard LED	Wavelength (nm)	V_F (I_F=20mA)	I_R (V_R=5v)
Green	565	1.8~2.6v	10 µA Max
Yellow	585	1.8~2.6v	10 µA Max

4.2 Profile of Wave Solder

A. Preheating
B. Soldering
C. Gradual Cooling

Suggested Wave Solder Curve

1. Tip temperature time: 3±1sec
2. Tip temperature time: 3±1sec

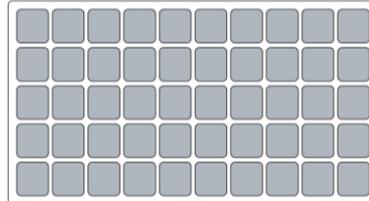The melting point of Sn99.3/Cu0.7

5. Packaging and Storage

5.1 SPQ

50 pcs/tray
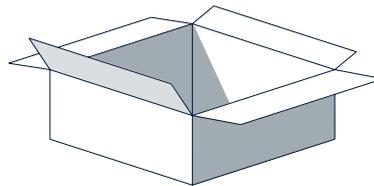
Tray dimension: 299*163*23 mm

Tray Weight: 296g

1 CTN = 24 trays = 1200 pcs

Carton dimensions: 320*300*301 mm

Carton Weight: 9kg

Changelog

Changelog for the datasheet

SPE-22-8-058 – TMJ4011BBNL

Revision: A (Original First Release)	
Date:	2022-11-08
Notes:	
Author:	Javier Vasena

Previous Revisions

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