Datasheet

RJ45 ICM 10/100Base-T Vertical

Part No:
TMJD4012BENL

Description:

RJ45 connector with integrated magnetics 10/100Base-T

Vertical Single Port with THT mount and LEDs

Features:

Industrial grade

AutoMDIX

Vertical

RoHS & REACH Compliant

Ireland
ISO 9001: 2015
Certified

ISO 9001 CERTIFICATION EUROPE

Taiwan
ISO 9001: 2015
Certified

QA RNATIONAL

UKAS QUALITY MANAGEMENT 046

QUALITY MANAGEMENT SYSTEM
IATF16949

1. Introduction

Featuring a popular footprint and compatible package to industry RJ45 Integrated Connectors standards, the Taoglas TMJD4012BENL is an RJ45 Integrated Connector 10/100Base-T Single Port and Vertical with shielded body 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
Transmitter filter & Receiver filter Type	Balance low pass 100Ω impedance	
Insertion Loss	-1.0dB MAX @ 1-100Mhz	
Return Loss	-18dB MIN @ 1-30Mhz	
	-16dB MIN @ 30-60Mhz	
	-12dB MIN @ 60-80Mhz	
Cross talk	-30dB MIN @ 1-100Mhz	
Common Mode Rejection	-30dB MIN @1-100Mhz	
Hi-Pot	Input (P1-P3) TO Output (J1-J2): 1500VAC 60sec	
	Input (P4-P6) TO Output (J3-J6): 1500VAC 60sec	

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

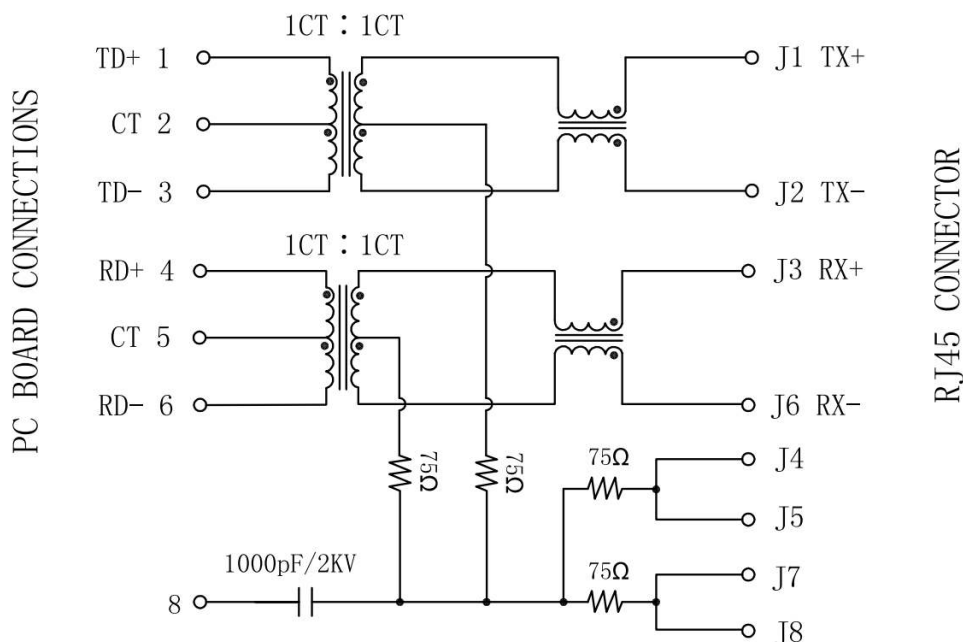| Material Specifications	
Housing	Thermoplastic PBT+30%G. F UL94V-0
Contact	Phosphor Bronze C5210R-EH Thickness = 0.35mm
Contact Plating	Gold Thickness = 6µ" min.
Pins	Brass C2680R-H Thickness = 0.35mm
Shield	Stainless Steel SUS 201-1-1/2H Thickness = 0.2mm

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

Top View

Left View

Mechanical Specifications	
Height Above Board	0.669 (17mm)
Width	0.665" (16.9mm)
Depth	0.635" (16.15mm)
Mounting Style	Through Hole (THT)
Mounting Angle	Vertical

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=20mA)	I_R (V_R=5v)
Green	565	1.8~2.6v	10 µA Max
Yellow	585	1.8~2.6v	10 µA Max
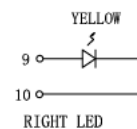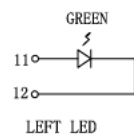
4.2 Profile of Wave Solder

A. Preheating
B. Soldering
C. Gradual Cooling

Suggested Wave Solder Curve

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

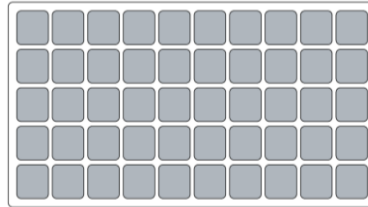The melting point of Sn99.3/Cu0.7
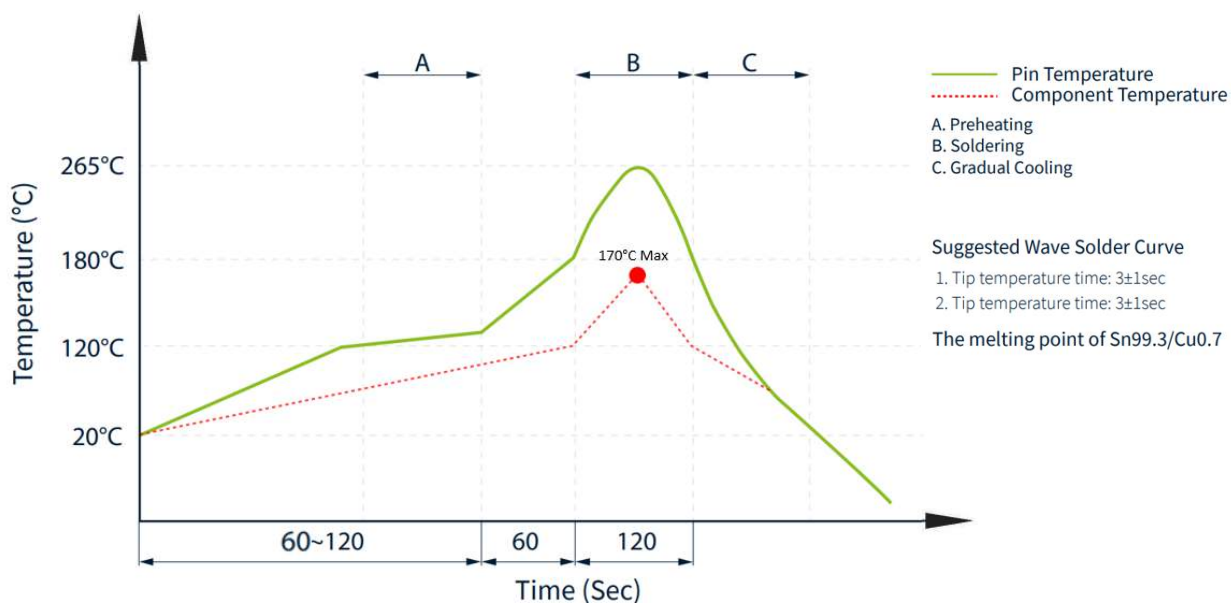
5. Packaging and Storage

5.1 SPQ

50 pcs/tray

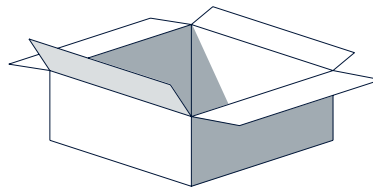Tray dimension: 283*146*24 mm

Tray Weight: 322g

1 CTN = 20 trays = 1000 pcs

Carton dimensions: 320*300*301 mm

Carton Weight: 7.5kg

Changelog

Changelog for the datasheet

SPE-22-8-042 – TMJD4012BENL

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

Previous Revisions

www.taoglas.com