TAOGLAS®

Datasheet

RJ45 ICM 1G Base-T PoE++

Part No:
TMJK6064A9NL

Description:

RJ45 connector with integrated magnetics 1G Base-T

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

Features:

PoE++ (720mA)

Industrial grade

AutoMDIX

EMI finger

Long Body

RoHS & REACH Compliant

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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 TMJK6064A9NL is an RJ45 Integrated Connector 1G Base-T Single Port Tab Up with EMI Finger and Long Body for PoE++ (720mA) 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 (load 100Ω)	-18dB MIN @ 1-30Mhz	
	-16dB MIN @ 30-60Mhz	
	-12dB MIN @ 60-80Mhz	
	-10dB MIN @ 80-100Mhz	
Cross talk	-30dB MIN @ 1-100Mhz	
Common Mode Rejection	-30dB MIN @ 1-100Mhz	
Balanced DC Line Current	720mA Max @ 57VDC Continuous 1.2A Max @ 57VDC For 200 Milliseconds.	
Hi-Pot	1500Vrms @ 60s	

Environmental Specifications

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Operating Temperature	-40°C TO +80°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	Copper alloy Brass H65Y Thickness = 0.2mm

Compliance

UL recognized - FILE NO. E528697
RoHS Compliant

Storage requirements

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

3.1 Mechanical Drawings

Front View

Left View

Bottom View
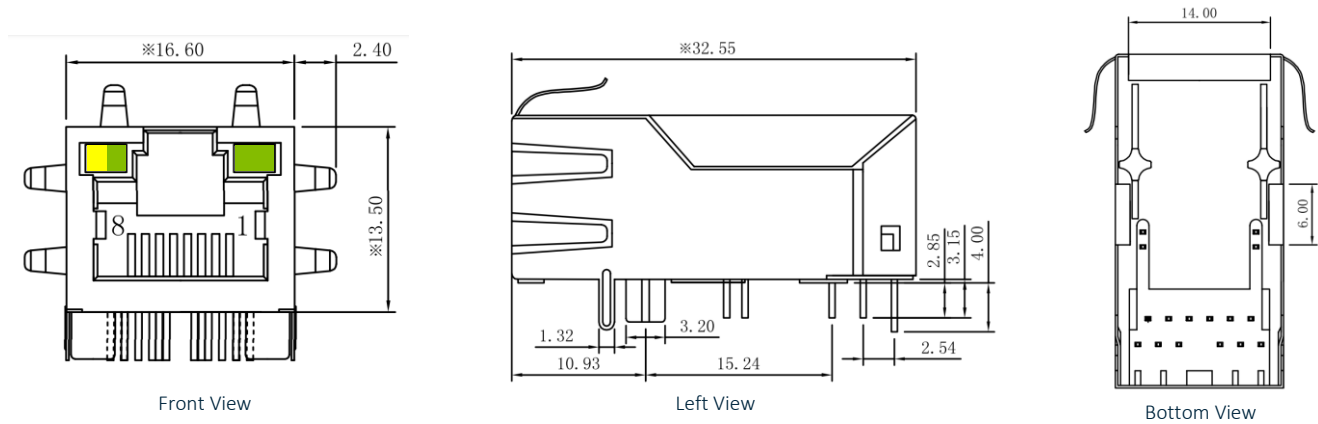
Mechanical Specifications	
Height Above Board	0.531" (13.5mm)
Width	0.653" (16.6mm)
Depth	1.28" (32.5mm)
Mounting Style	Through Hole (THT)
Mounting Angle	Right Angle

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

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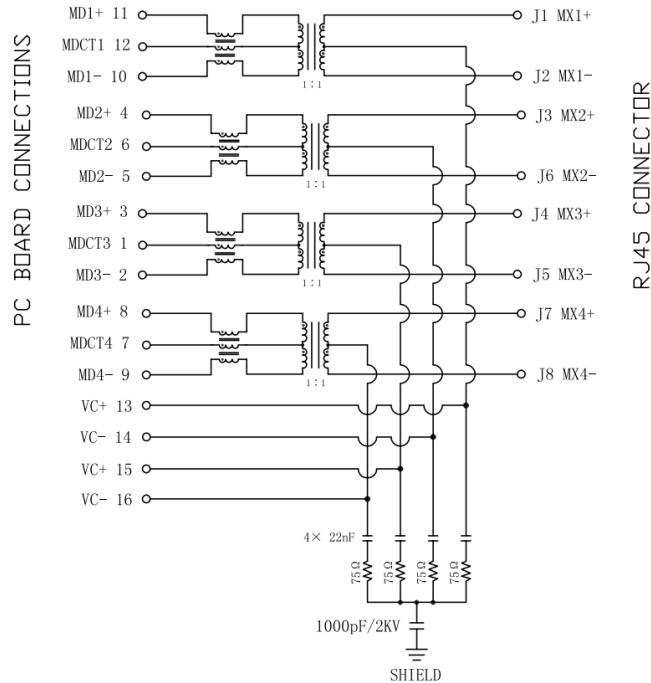DATE CODE
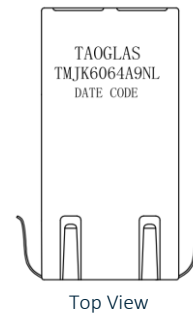
Top View
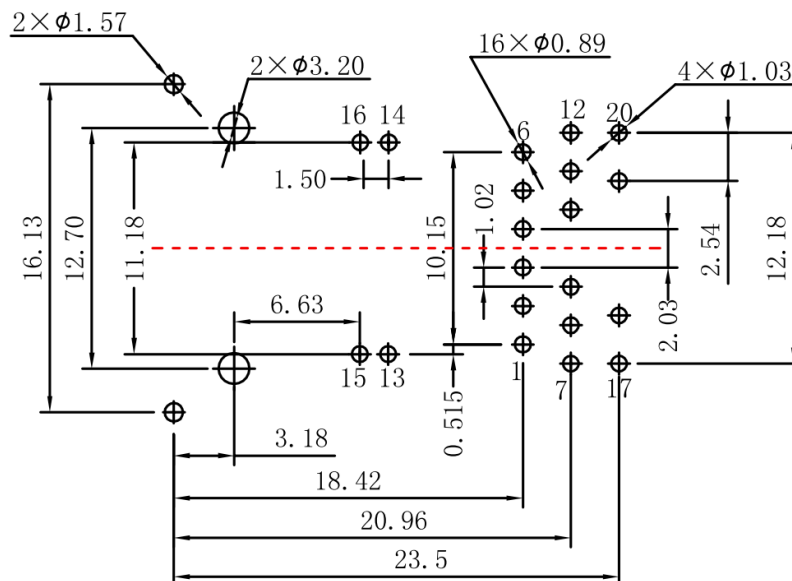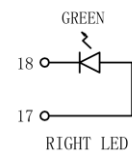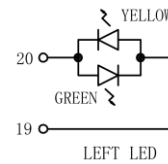
3.2 PCB Layout

Suggested PCB Layout (Top View)

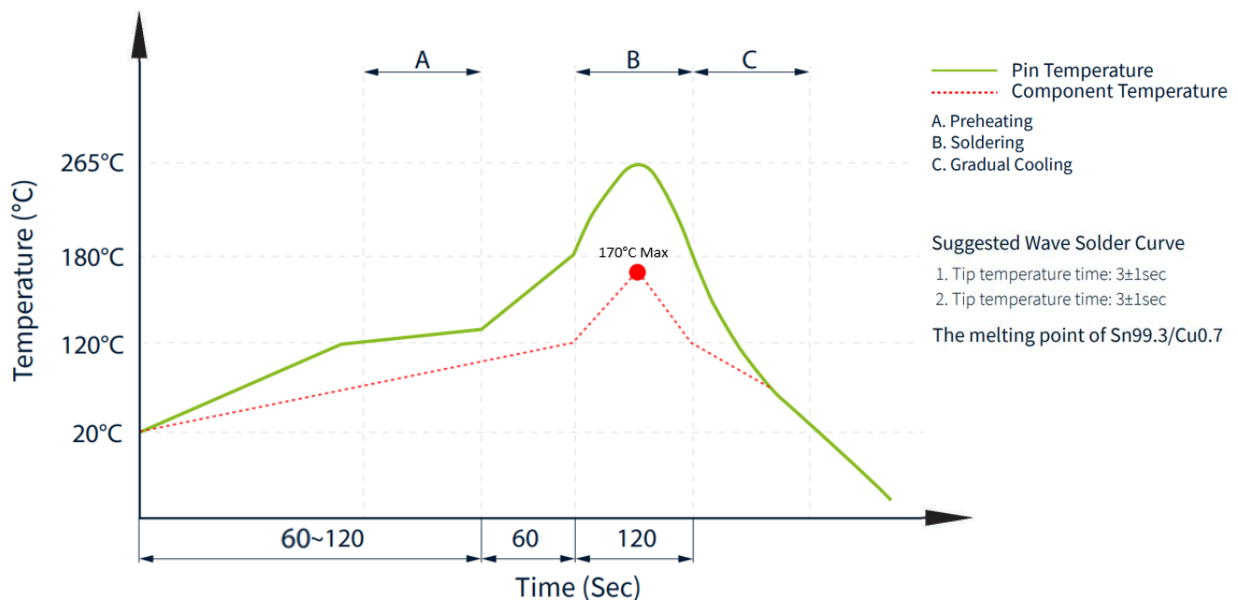Dimensions are in millimeters with the following tolerances: X.XX = ±0.10

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

— Pin Temperature
······ Component Temperature

A. Preheating
B. Soldering
C. Gradual Cooling

Suggested Wave Solder Curve

1. Tip temperature time: 3±1sec
2. Tip temperature time: 3±1sec
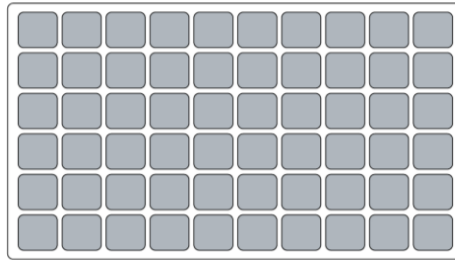
The melting point of Sn99.3/Cu0.7

5. Packaging and Storage
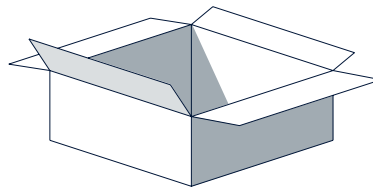
5.1 SPQ

60 pcs/tray

Tray dimension: 292*176*33 mm

Tray Weight: 606g

1 CTN = 16 trays = 960 pcs

Carton dimensions: 370*300*300 mm

Carton Weight: 10.5kg

Changelog

Changelog for the datasheet

SPE-22-8-045 – TMJK6064A9NL

Revision: B

Date:	2023-05-02
Notes:	Hi-Pot unit changes
Author:	Javier Vasena

Previous Revisions

Revision: A (Original First Release)

Date:	2022-11-08
Notes:	
Author:	Javier Vasena

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