TAOGLAS

Datasheet

RJ45 ICM 1G Base-T Short Body

Part No:
TMJG0813GENL

Description:

RJ45 connector with integrated magnetics 1G Base-T

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

Features:

Short Body

Transformer + CMC

Current/Voltage Drive

Shielded EMI Finger

RoHS & REACH Compliant

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1. Introduction

The Taoglas TMJG0813GENL is a 1G Base-T single-port, tab-DOWN RJ45 Integrated Connector with a shielded EMI Finger short body design, offering extra space. It features a widely recognized footprint and a compatible package that aligns with industry standards for RJ45 Integrated Connectors, making it popular among users.

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	350uH Min 100KHz, 0.1Vrms, 8mA DC bias
Turns Ratio（±2%）	1CT:1CT
Insertion Loss	-1.0dB MAX @1-100MHz
Return Loss (dB Min)	-20dB MIN @1-10MHz
	-16dB MIN @10-30MHz
	-12dB MIN @30-60MHz
	-10dB MIN @60-100MHz
Crosstalk	1-30MHz: -40dB Min
	30-60MHz: -35dB Min
	60-100MHz: -30dB Min
Common Mode Rejection	1-50MHz: -30dB Min
	50-150MHz: -20dB Min
Hipot	1500Vrms MIN

Environmental Specifications	
Operating Temperature	0°C TO +70°C

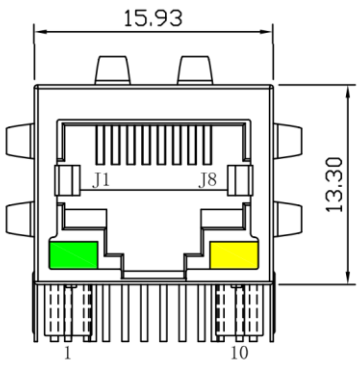
Material Specifications	
Housing	Thermoplastic PBT+30%G. F UL94V-0
Contact	Phosphor Bonze C5210R-EH Thickness=0.35mm
Pins	Brass C2680R-H Thickness=0.35mm
Shield	SUS 201-1/2H Thickness=0.2mm
Contact plating	Gold 6 micro-inches min. in contact area.
Wave solder tip temperature	250℃ Max, 5 Sec

Compliance
UL recognized - FILE NO. E528697
IEEE 802.3
RoHS Compliant

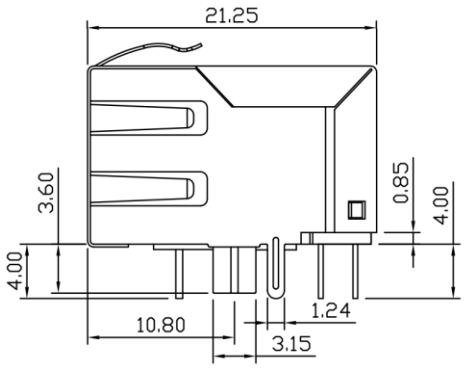
Storage requirements	
Humidity	MSL - 1
Storage Temperature	-40°C TO +85°C

3. Mechanical

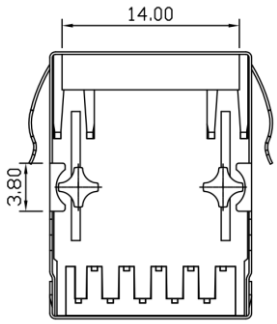
3.1 Mechanical Drawings



Front View



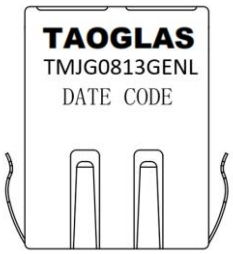
Left View



Bottom View

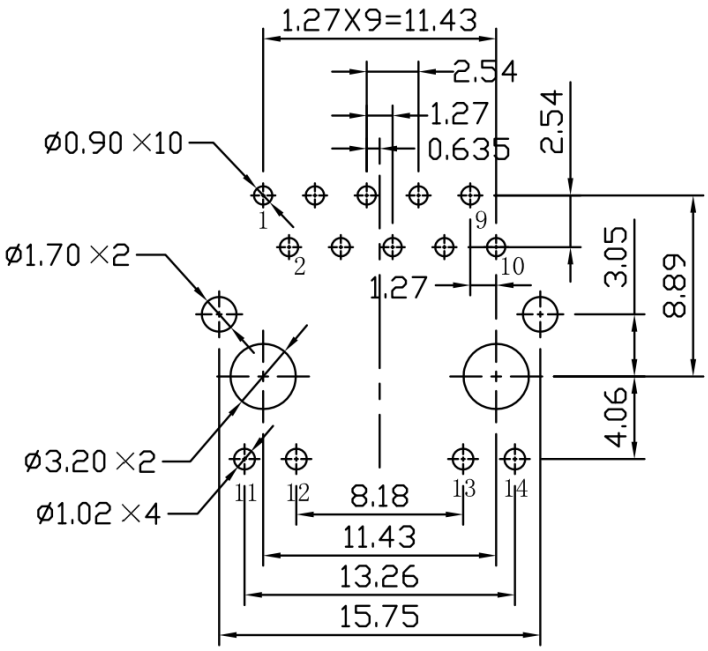
Mechanical Specifications	
Height	13.305mm
Width	15.93mm
Depth	21.25mm
Weight	6g
Mounting Style	Through Hole (THT)
Mounting Angle	Right Angle

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



Top View

3.2 PCB Layout

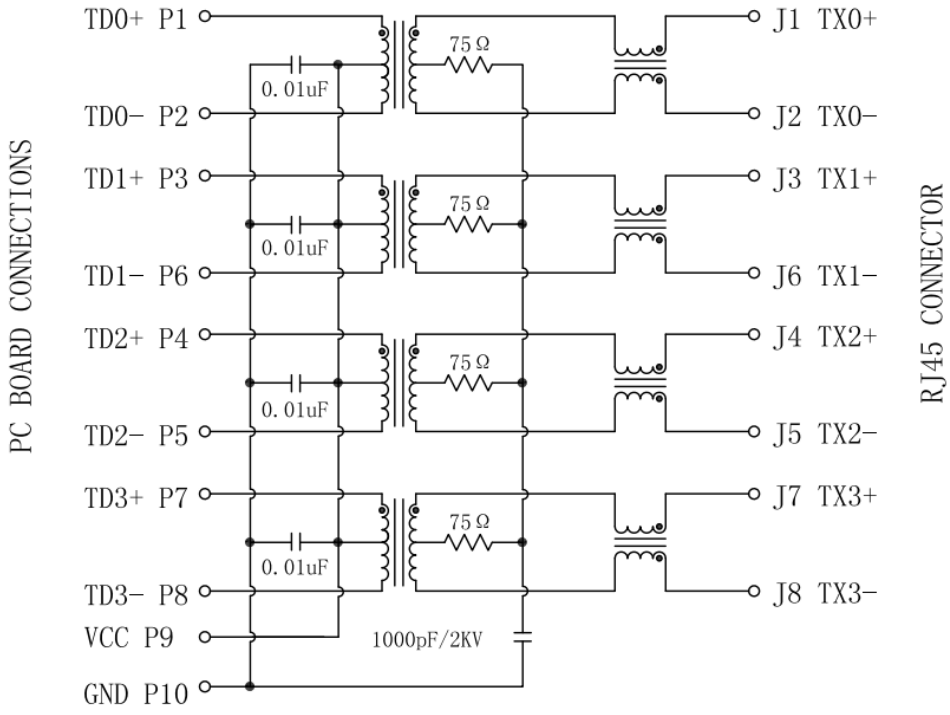


Suggested PCB Layout (Top View)

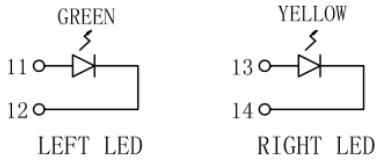
Dimensions are in millimeters with the following tolerances: X.XX = ±0.10

4. Electrical

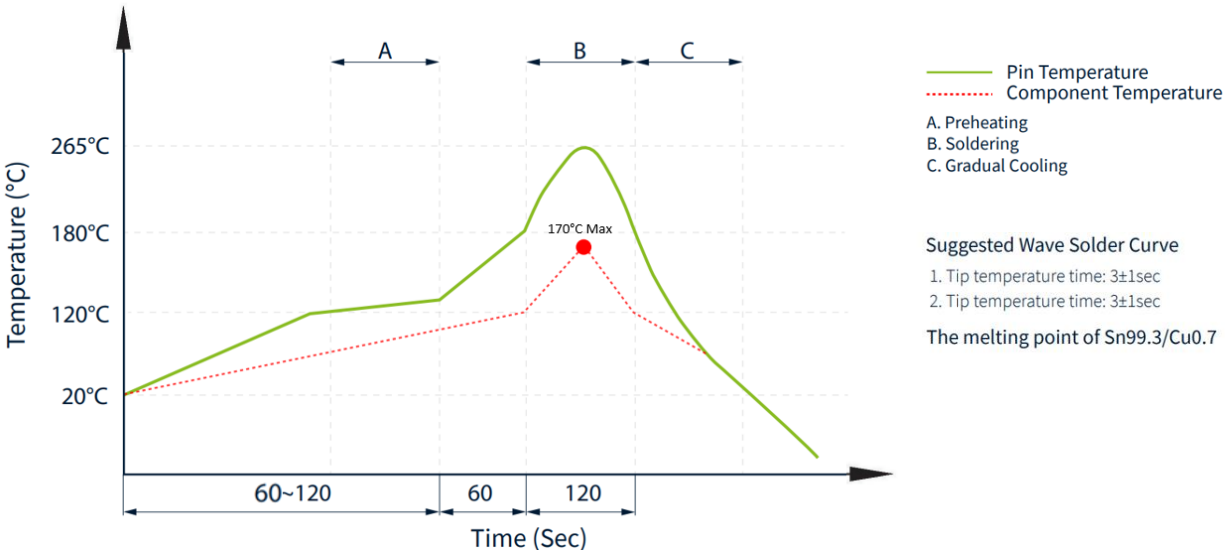
4.1 Electrical Drawings



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



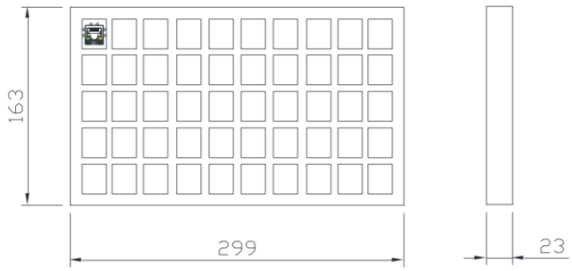
5. Packaging

5.1 SPQ

50 pcs/tray

Tray dimension: 299*163*23 mm

Tray Weight: 370g



1 Carton = 24 trays = 1200 pcs

Carton dimensions: 320*300*310mm

Carton Weight: 8.7kg

5.2 Label

Taoglas Limited

P/N NO: XXXXXXXX

QYT: XXX PCS DC: XXXX

DATE: XXXX-XX-XX

SPQ Label (8x4cm)

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-23-8-209 – TMJG0813GENL

Revision: A (Original First Release)	
Date:	2023-10-01
Notes:	
Author:	Javier Vasena

Previous Revisions

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