

# Datasheet



## RJ45 ICM 1G Base-T 2x1 Ports

**Part No:**  
TMJG17747A83NL

**Description:**  
RJ45 connector with integrated magnetics 1G Base-T.  
Dual Stack Port THT mount and LEDs.

**Features:**  
2x1 Configuration  
3 Wire + Transformer  
Voltage/Current Drive  
Shielded EMI Finger  
Board guide  
Industrial grade

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QUALITY MANAGEMENT SYSTEM  
IATF16949

## 1. Introduction



Featuring a popular footprint and compatible package to industry RJ45 Integrated Connectors standards, the Taoglas TMJG17747A83NL is an RJ45 Integrated Connector 1G Base-T Single 2x1 Ports with shielded EMI finger body and designed for Industrial grade 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		
Inductance OCL	350 $\mu$ H MIN @ 100KHz 0.1V 8mA DC Bias	
Turns Ratio ( $\pm 2\%$ )	TX=1CT: 1CT	RX=1CT: 1CT
Insertion Loss	100KHz: -1.2dB Max 1~100MHz: -0.2-0.002*f^1.4 dB MAX 125MHz: -3.0dB Max	
Return Loss (@100 $\Omega$ $\pm 15\%$ )	0.1~40MHz: -16dB Min 40~100MHz: -10+20*LOG10(f/80 MHz) dB Min	
Crosstalk (dB Min)	1MHz: -50 10~100MHz: -52+22*LOG10(f/10)	
Common Mode Rejection Ratio	2MHz: -50dB Min 30~200MHz: -15+20*LOG10(f/200) dB Min	
Hi-Pot	1500Vrms	

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

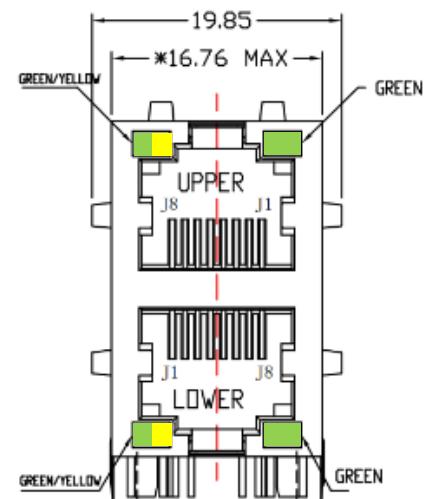
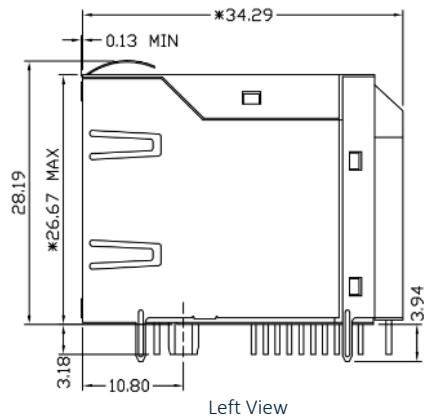
Material Specifications	
Housing	Thermoplastic UL94V-0
Contact/Shield	Copper alloy
Shield plating	Nickel
Contact Plating	Gold in contact area Thickness = 6 $\mu$ " min.

Compliance	
UL recognized - FILE NO. E528697	
	RoHS Compliant

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

### 3. Mechanical

#### 3.1 Mechanical Drawings

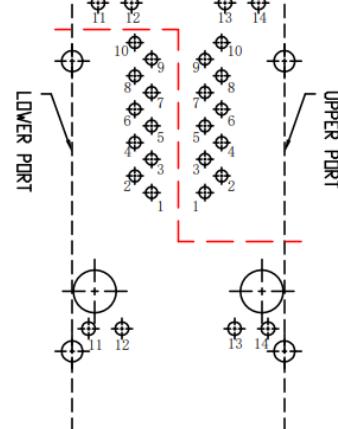
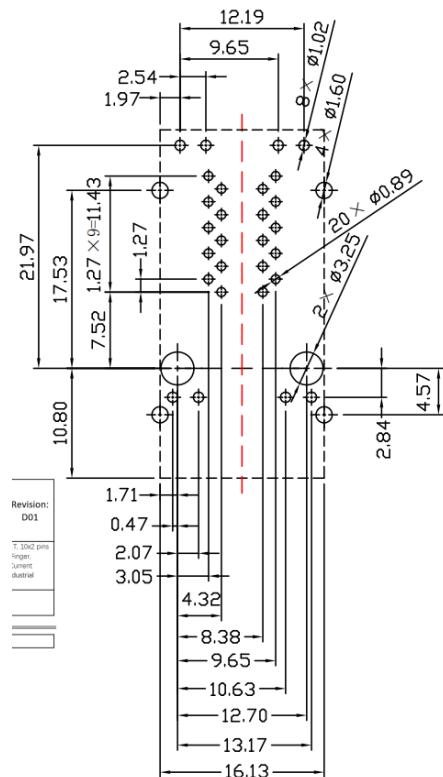


#### Mechanical Specifications

Height Above Board	28.19 mm
Width	19.85 mm
Depth	34.29 mm
Mounting Style	Through Hole (THT)
Mounting Angle	Right Angle

Dimensions are in millimeters with the following tolerances: X.XX =  $\pm 0.25$

#### 3.2 PCB Layout

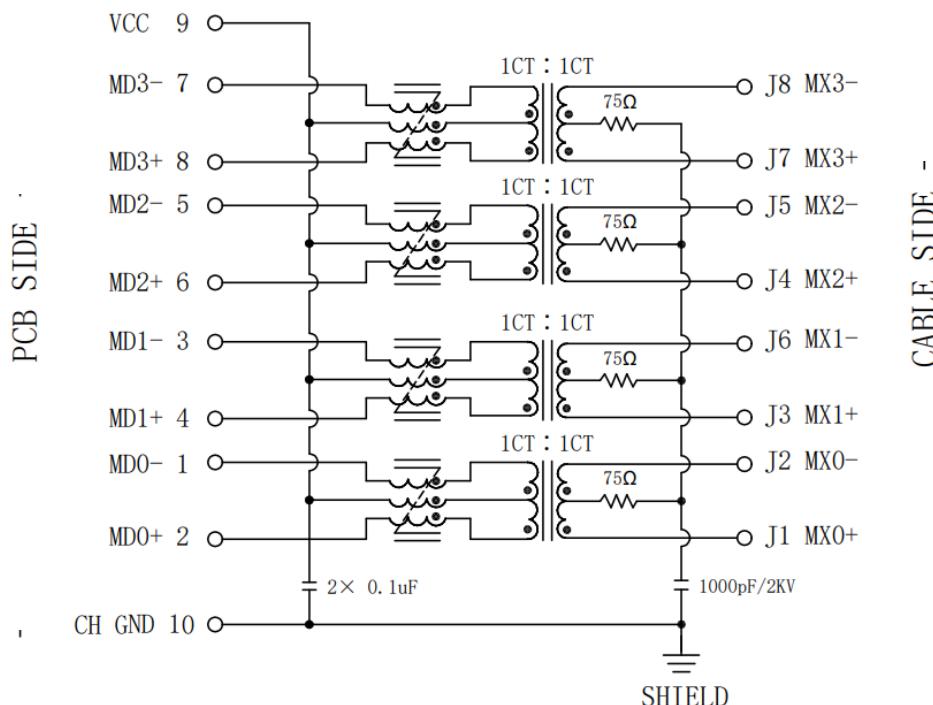


Suggested PCB Layout (Top View)

Dimensions are in millimeters with the following tolerances: X.XX =  $\pm 0.10$

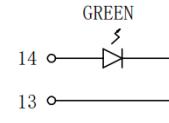
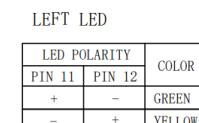
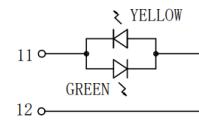
## 4. Electrical

### 4.1 Electrical Drawings



#### LED Electrical Specification

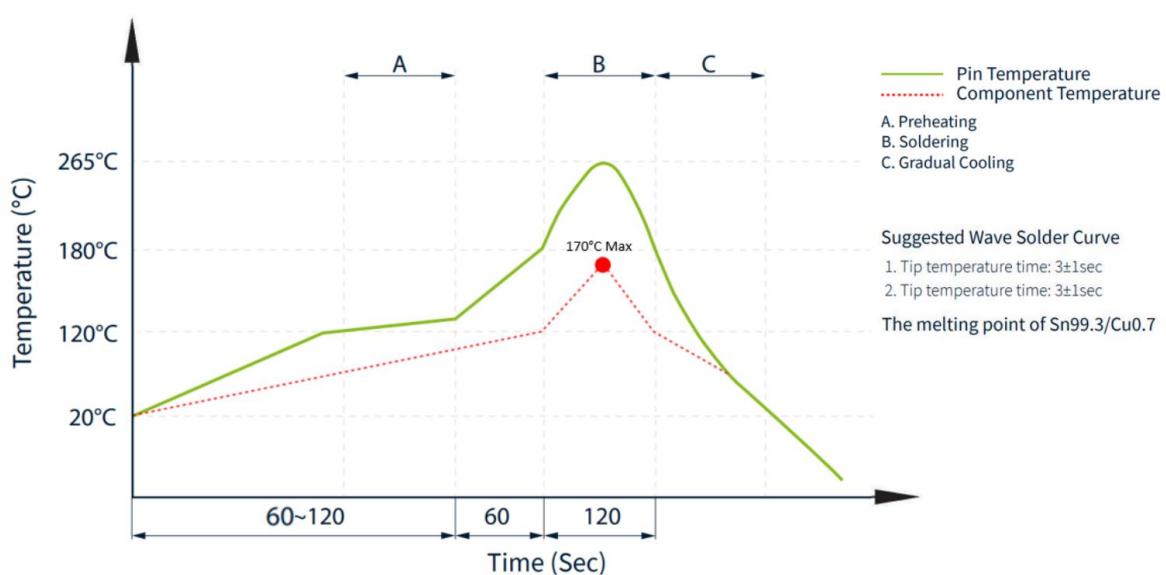
Standard LED	Wavelength (nm)	$V_F$ ( $I_F=20\text{mA}$ )	$I_R$ ( $V_R=5\text{v}$ )
Green	565	1.8~2.6v	10 $\mu\text{A}$ Max
Yellow	585	1.8~2.6v	10 $\mu\text{A}$ Max



RIGHT LED

LED POLARITY	COLOR
PIN 11	GREEN
PIN 12	YELLOW

### 4.2 Profile of Wave Solder



## 5. Packaging

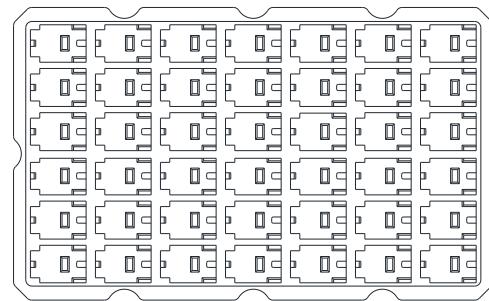
### 5.1 SPQ

42 pcs/tray

Tray dimension: 340\*220\*44 mm

Tray Weight: 875g

Packaging material: PVC



1 Carton = 4 trays = 168 pcs

Carton dimensions: 350\*230\*210mm

Carton Weight: 3.75kg



### 5.2 Label

Taoglas Limited	
P/N NO:	XXXXXXX
PO:	XXXXXXX
QYT:	XXX PCS
DATE:	XXXX-XX-XX

**Carton Label (8x4cm)**

# Changelog

Changelog for the datasheet

**SPE-23-8-070 – TMJG17747A83NL**

**Revision: B**

Date: 2023-07-05

Notes: Update in solder profile

Author: Javier Vasena

**Previous Revisions**

**Revision: A (Original First Release)**

Date: 2023-03-30

Notes:

Author: Javier Vasena



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