

# WitJack 2X1 RJ45 RJ-201G54

# Witmag

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## Features

### Description:

- 10/100/1000 Base-TX RJ45 2X1 with LEDs 8-pin(J0 series) integrated magnetics connector(ICM), designed to support applications, such as SOHO (ADSL modems), LAN-on-Motherboard(LOM), Hub and Switches.

### Features and Benefits:

- 2X1 Rj45 with internal magnetics
- Suitable for CAT 5 & 6 Fast Ethernet Cable or better UTP
- Internal magnetics are 100% electrically tested for HI-POT and functionality

### Electrical Performance Summary:

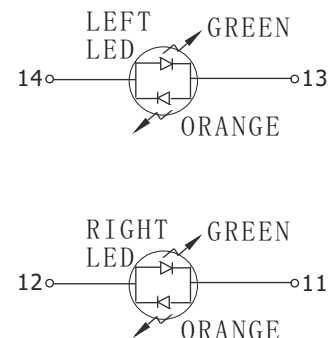
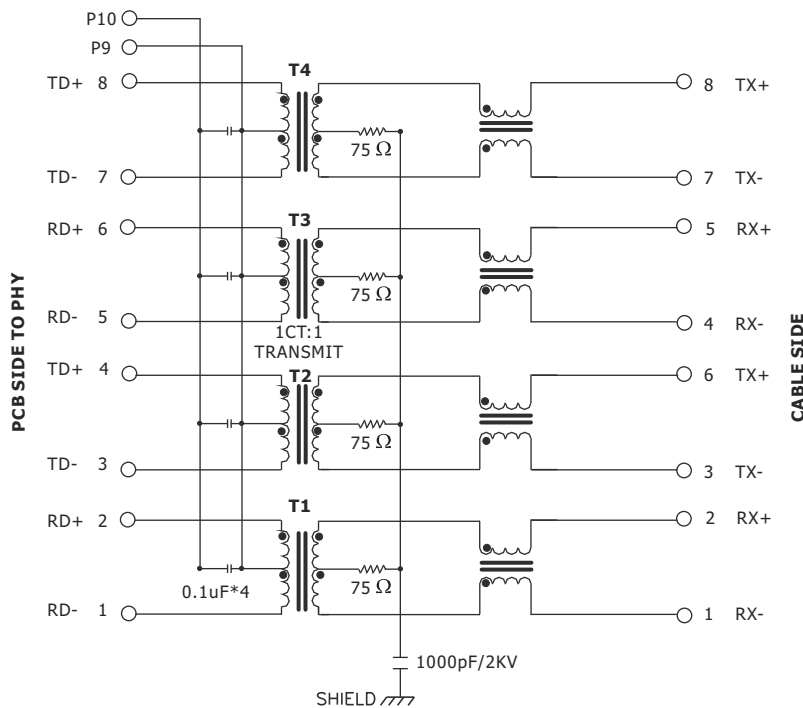
- Internal magnetics options available
- Meets or exceeds IEEE 802.3 standard for 1000Base-T
- 350 uH minimum OCL with 8 mA bias current
- High performance for maximum EMI suppression
- Minimum 1500 Vrms isolation per IEEE 802.3 requirement

## SPEC

Electrical Specifications @25°C - Operating Temperature 0°C to 70°C

Part Number	Turns Ratio		EMI Fingers	LEDs L/R	Insertion Loss (dB TYP)	Return Loss (dB TYP)					Crosstalk (dB TYP)			Common Mode Rejection (dB TYP)	Hipot (Vrms)
	TX	RX				1-65 MHz	1-10 MHz	10-30 MHz	30-60 MHz	60-80 MHz	1-30 MHz	30-60 MHz	60-100 MHz		
RJ-201G54	1CT:1	1CT:1	YES	G&O/G&O	-1	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500

## Schematics



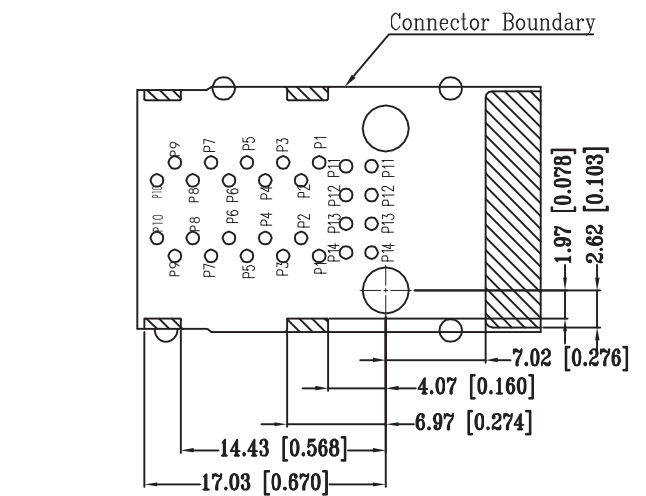
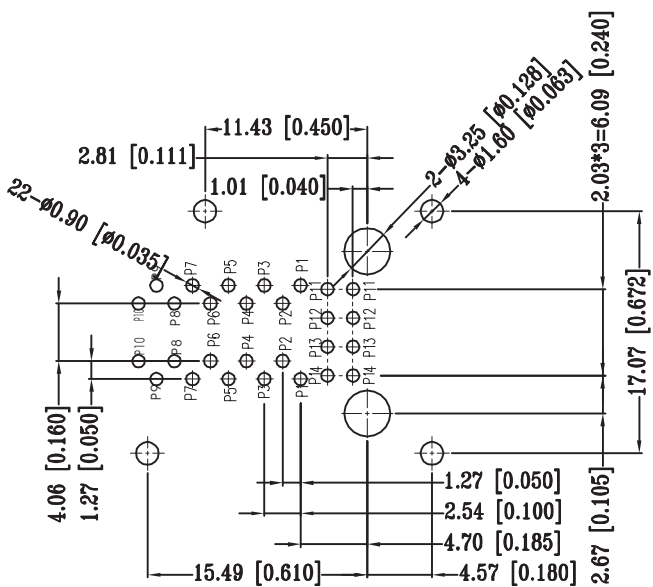
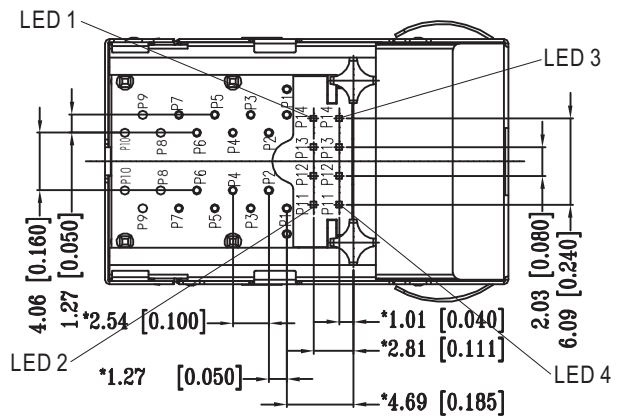
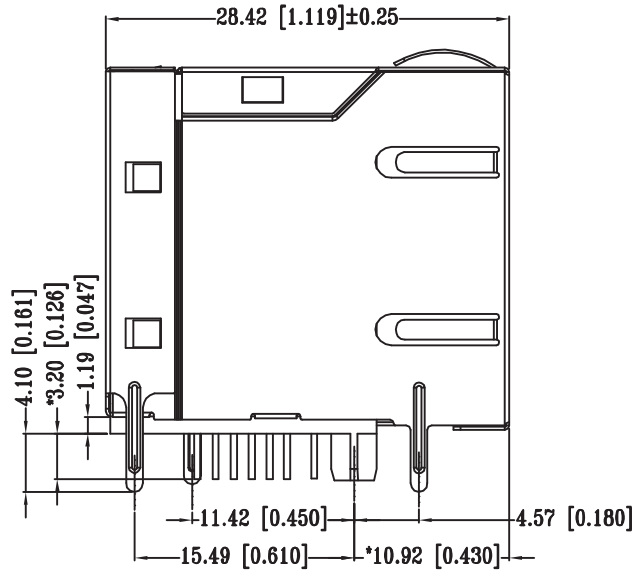
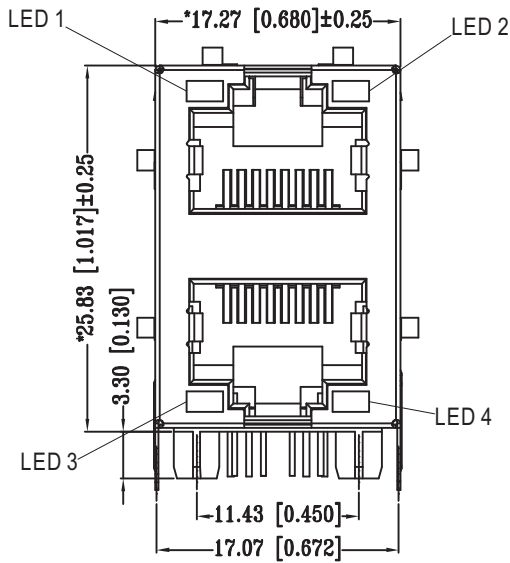
Note: Connect GND to PCB ground

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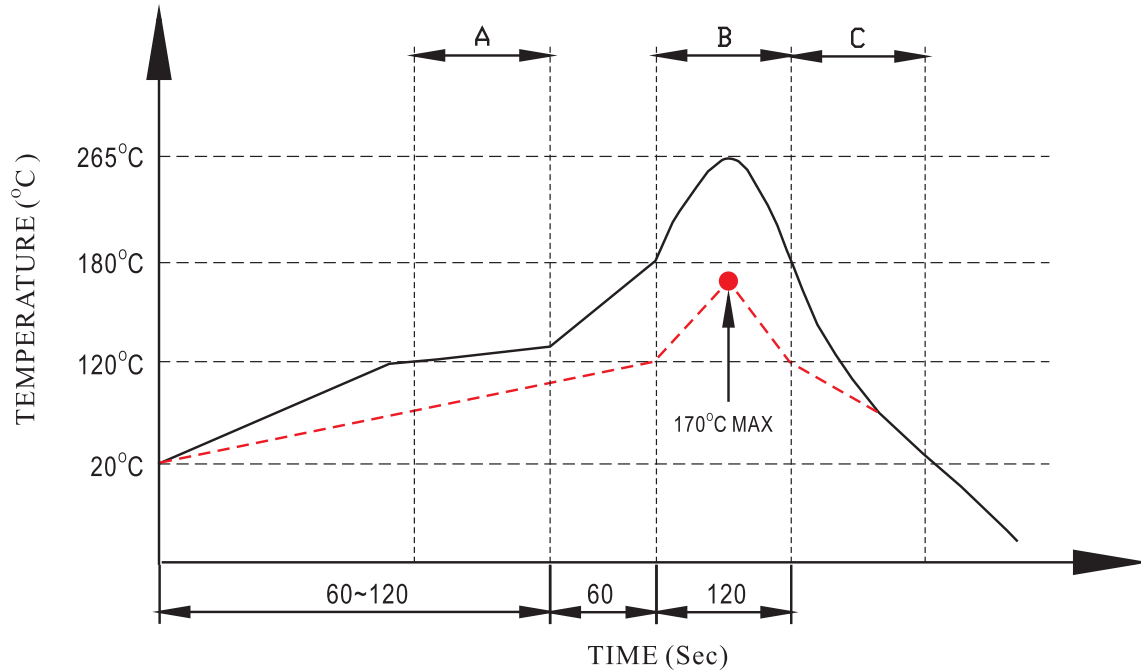
## Mechanicals



Recommended PWB Layout (Component Side View):

**TOLERANCES UNLESS OTHERWISE SPECIFIED:**  
 Unless otherwise specified, all dimensions and clearances  
 is ±0.254 / 0.010. 0~10.00<sup>+</sup>0.100, 10.00~20.00<sup>+</sup>0.150

**Profile of wave solder**



— PIN TEMPERATURE  
 - - - COMPONENT TEMPERATURE  
 A. Preheating B. Soldering C. Gradual Cooling

**SUGGESTED WAVE SOLDER CURVE**  
 (1) Tip temperature : 265°C max  
 (2) Tip temperature time : 3±1sec

\*The melting point of Sn99.3/Cu0.7

**Profile of wave solder**

◆ **Design and Construction**

- ✧ Product shall be of design, construction and physical dimensions specified on applicable.

◆ **Material**

✧ **Terminal Parts**

- **RJ Terminal: PH. Bronze, Thickness=0.3mm, Finish: Contact Area: 6u" Gold**
- **Input Terminal: Brass, Thickness=0.35mm, Finish: 100u" min. Mt. Tin**
- **Case Terminal: Brass, Thickness=0.3mm, Finish: 100u" min. Tin**

✧ **Plastic Parts<UL94V-0>**

- **Housing: Thermoplastic, Black**
- **Case: Thermoplastic, Black**
- **Spacer: Thermoplastic, Black**
- **Light Pipe: Thermoplastic, Black**

✧ **Shield Parts**

- **Front Shield: Stainless, Thickness=0.2mm, unplating**
- **Back Shield: Stainless, Thickness=0.2mm, Pre-soldering**

◆ **Operating and Storage Temperature**

- **Operating Temperature: 0°C to +70°C**
- **Storage Temperature: -40°C to +85°C**

◆ **RJ45 Specifications**

- **Insulation Resistance 500MΩmin**
- **Insertion force with the latch depressed 22N max**
- **Removal force with the latch depressed 44N max**
- **Locking Force of Plug Latch: 50N min. @60±5 sec**
- **Durability: 2500 cycles**

◆ **Performance and Test Description**

- **Product is designed to meet electrical, mechanical and environmental performance requirements specified in below table. All tests are performed at ambient environmental conditions per MIL-STD-1344A and EIA-364 unless otherwise specified.**

◆ **Packaging and Packing**

- **All parts shall be packaged and packed to protect against physical damage, corrosion and deterioration during shipment and storage.**