

## 10/100 Base-TX Single Port Connector with LEDs and Magnetic For Power over Ethernet Application

**MODEL NO. : RJPLB-001TC1**

### Features:

RoHS Compliant

Fully shielded magnetics protect data from internally generated digital noise

Reduces the overall length of the signal path for improved common mode performance

Implements full common mode termination scheme with used and unused twisted pairs

☉ Meets IEEE802.3af specification, Power feeding over the signal pairs

Integrates high voltage capacitor to chassis ground

Supports all major transceivers with matched turns ration and complete integration of specified termination

Design for 100 base transmission over UTP-5 cable

Operating Temp Range: -40 to +85

Storage Temp Range:-55 to +125

DC Current 350mA

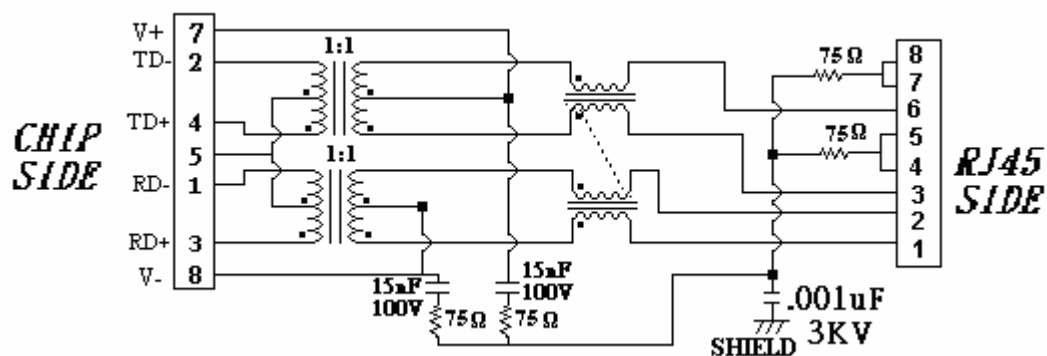
Solderability: Leads shell Meet MIL-STD-202-Method 208D for solderability

Flammability: UL94V-0

### Typical Performance Characteristics @ 25°C

Insertion Loss (dB MAX)	Return Loss (dB Min @100Ω)				Differential to Common Mode Rejection (dB MIN)	Cross talk (dB MIN)					CMRR (dB MIN)	Isolation Voltage (Vrms min)
MHz	MHz				MHz	MHz					MHz	1500
1~100	1~30	40	50	60~80	1~100	20	40	60	80	100	1~100	
-1.0	-16	-14	-12	-10	-35	-47	-40	-37	-35	-33	-30	

### Schematic: Design on MDI Interface Circuitry



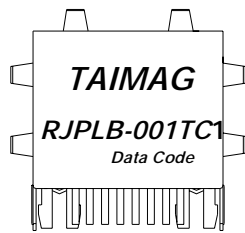
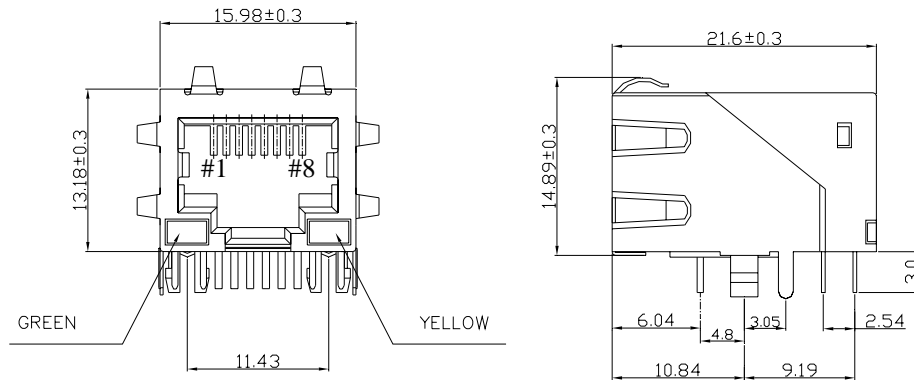


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DATE : 2005/09/23 -I (REV:A2)

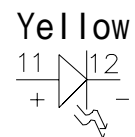
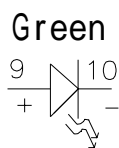
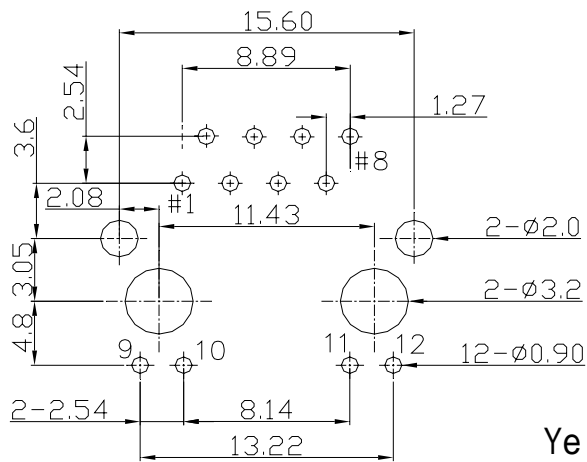
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Dimension: mm

TOLERANCE:  $\pm 0.15$  (unless otherwise specified)



Connector Marking



RECOMMENDED P.C.B LAYOUT  
COMPONENT SIDE OF BOARD



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## MODEL NO. : RJPLB-001TC1

### Ordering Information

**R J P L B - 0 0 1 T C 1**

R J 4 5	P o E	W i t h L E D	S e r i e s N O .
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## Requirements :

### 1. Design and Construction

Product shall be of design, construction and physical dimensions specified on applicable product drawing.

### 2. Materials and Finish

#### A. Contact:

**RJ Contact : Phosphor Bronze, Thickness=0.30mm**

**Finish : Contact Area : 6 $\mu$ "min. Gold over 50  $\mu$ "min. Nickel**

**RJ Joint Contact : Brass, Thickness=0.30mm**

**Finish : 80 $\mu$ "min. Sn over 50  $\mu$ "min. Nickel**

#### B. Plastic Part :

**(1) Set Housing : Thermoplastic, PBT, Black**

**UL FILE NO. : E107536**

**Manufacturer : SHIKONG SYNTHETIC FIBERS CORP.**

**Grade : E202G30BK**

**Flame Class : UL 94V-0**

**(2) Insert : Thermoplastic, PBT, Black**

**UL FILE NO. : E107536**

**Manufacturer : SHIKONG SYNTHETIC FIBERS CORP.**

**Grade : E202G30BK**

**Flame Class : UL 94V-0**

**(3) Spacer : Thermoplastic, PBT, Black**

**UL FILE NO. : E107536**

**Manufacturer : SHIKONG SYNTHETIC FIBERS CORP.**

**Grade : E202G30BK**

**Flame Class : UL 94V-0**



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### **C. Shield Material :**

**Cartridge  $t=0.25\text{mm}$**

**$10\mu\text{''}$ - $20\mu\text{''}$  Thick Nickel over Brass**

### **D. LED Lamp**

**(a) Lens Color : Transparent with color**

**(b) Emitted Color : Green & Yellow**

**(c) View Angle :  $65^\circ$**

**(d) Wave Length : Green 565nm ; Yellow 585nm**

**(e) Recommended operation current (IF) : 20 mA**

### **3. Ratings**

**(1) Voltage rating : 125 VAC**

**(2) Current rating : 1.5A**

### **Durability :**

**(1) 1000 cycles with no function damage for RJ-45 . Abnormalities shall be present after the test.**

**(2) Low Level Contact Resistance :  $\Delta R=30\text{m}\Omega$  maximum (final).**

**(3) The sample should be mounted in the tester and fully mated and unmated 500 times per hour at the rate of 25mm/min. EIA-364-09C.**