

## Single 10/100 BASE-TX Filtered Connector

MODEL NO. : TJ-009LA1

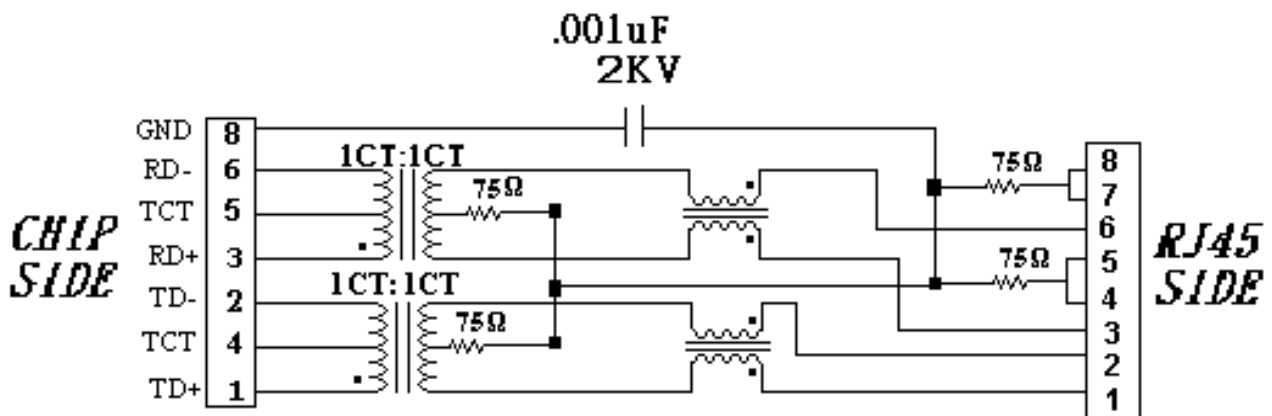
### Features :

- ⊙ 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 IEEE802.3 Baseline Wander Compensation specification
- ⊙ Integrates high voltage capacitor to chassis ground
- ⊙ Supports all major transceivers with matched turns ration and complete integration of specified termination
- ⊙ Design for 100base-tx transmission over UTP-5 cable
- ⊙ Operating TEMP. range: -40°C to +85°C
- ⊙ Storage TEMP. range: -55°C to + 125°C
- ⊙ Primary OCL inductance: 350μH MIN. at 100KHz/0.1Vrms with 8mA DC bias

### Typical Performance Characteristics @25°C

| Insertion Loss<br>(dB MAX) | Return Loss<br>(dB Min @100±15Ω) |     |     |       | Differential to<br>Common<br>Mode Rejection<br>(dB MIN) | Cross talk<br>(dB MIN) |     |     |     |     | CMRR<br>(dB MIN) | Isolation<br>Voltage<br>(Vrms min) |
|----------------------------|----------------------------------|-----|-----|-------|---|------------------------|-----|-----|-----|-----|------------------|------------------------------------|
|                            | MHz                              | MHz |     |       |   | MHz                    | MHz |     |     |     |                  |                                    |
| 1~100                      | 1~30                             | 40  | 50  | 60~80 | 1~100   | 20                     | 40  | 60  | 80  | 100 | 1~100            | 1500                               |
| -1.0                       | -16                              | -14 | -12 | -10   | -33   | -47                    | -40 | -37 | -35 | -33 | -30              |                                    |

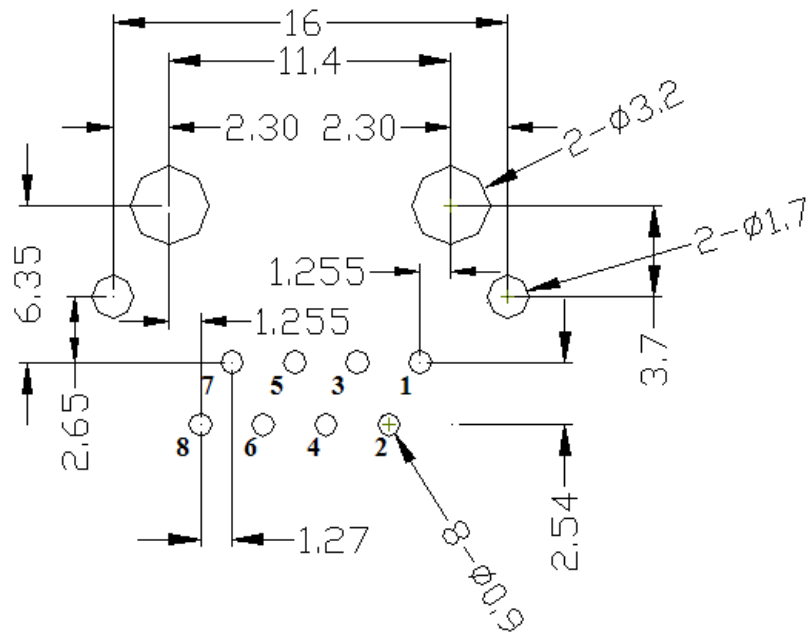
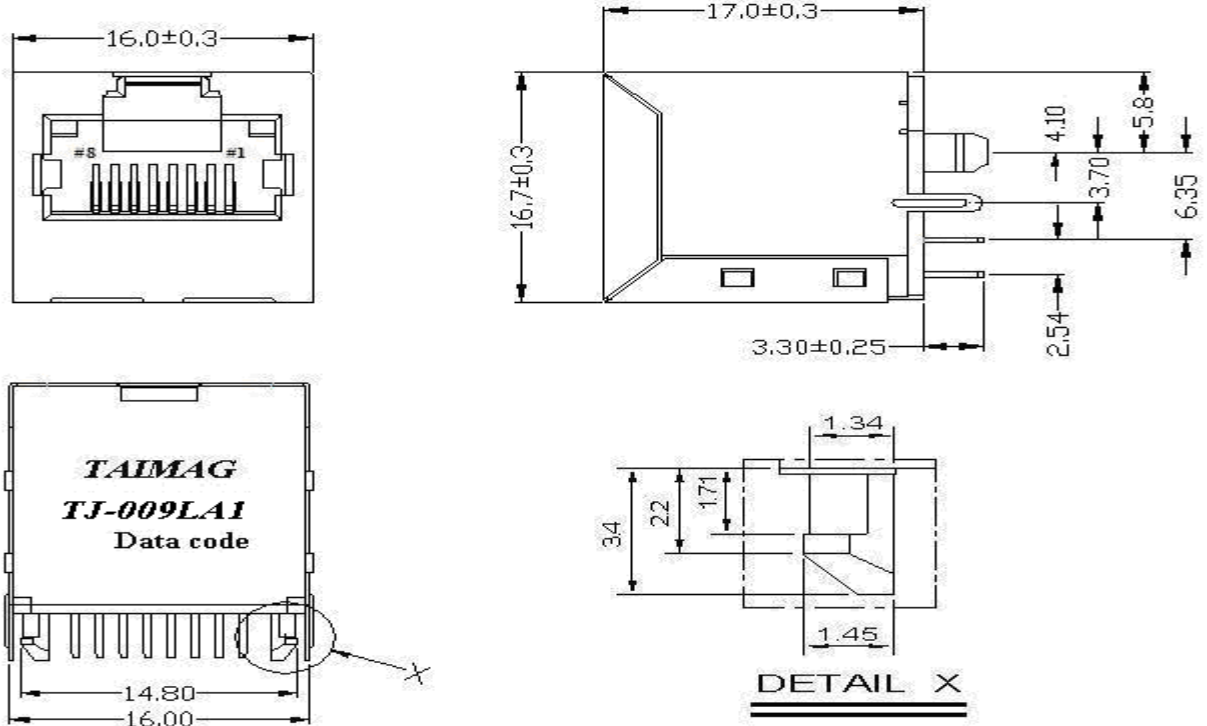
### Schematic Design on MDI Interface Circuitry



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Dimension: mm

TOLERANCE:±0.15 (unless otherwise specified)



SUGGESTED PCB LAYOUT  
(TOP VIEW)



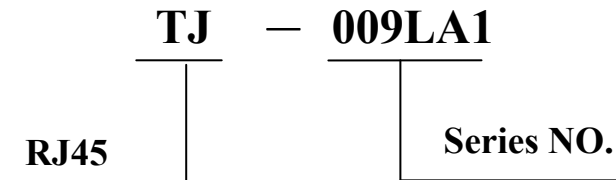
NUMBER:RD-SD-TJ-009LA1  
DATE : 2010/06/30 R(REV:A1)

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### Ordering Information



### 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 : SPCC, Thickness=0.30mm**

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

##### B. Plastic Part :

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

**UL FILE NO. : E106764**

**Manufacturer : POLYPLASTICS CO LTD.**

**Grade : E130i(d)(e)**

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

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

**UL FILE NO. : E106764**

**Manufacturer : POLYPLASTICS CO LTD.**

**Grade : E130i(d)(e)**

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

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

**UL FILE NO. : E106764**

**Manufacturer : POLYPLASTICS CO LTD.**

**Grade : E130i(d)(e)**

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



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

**Cartridge  $t=0.25\pm 0.05$ mm**

**10  $\mu$ "-20  $\mu$ " Thick Nickel over Brass**

### **Durability :**

- (1)1000 cycles with no function damage for RJ-45 . Abnormalities shall be present after the test.**
- (2)Low Level Contact Resistance :  $\Delta R=30m\Omega$  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.**

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1. Unit weight :5.7 grams
2. package : 100 pcs / tray / 0.61 kgms
3. Carton : 1000 pcs / 10 layers of tray
4. Gross weight : 6.6455 kgms

### Package drawing:

